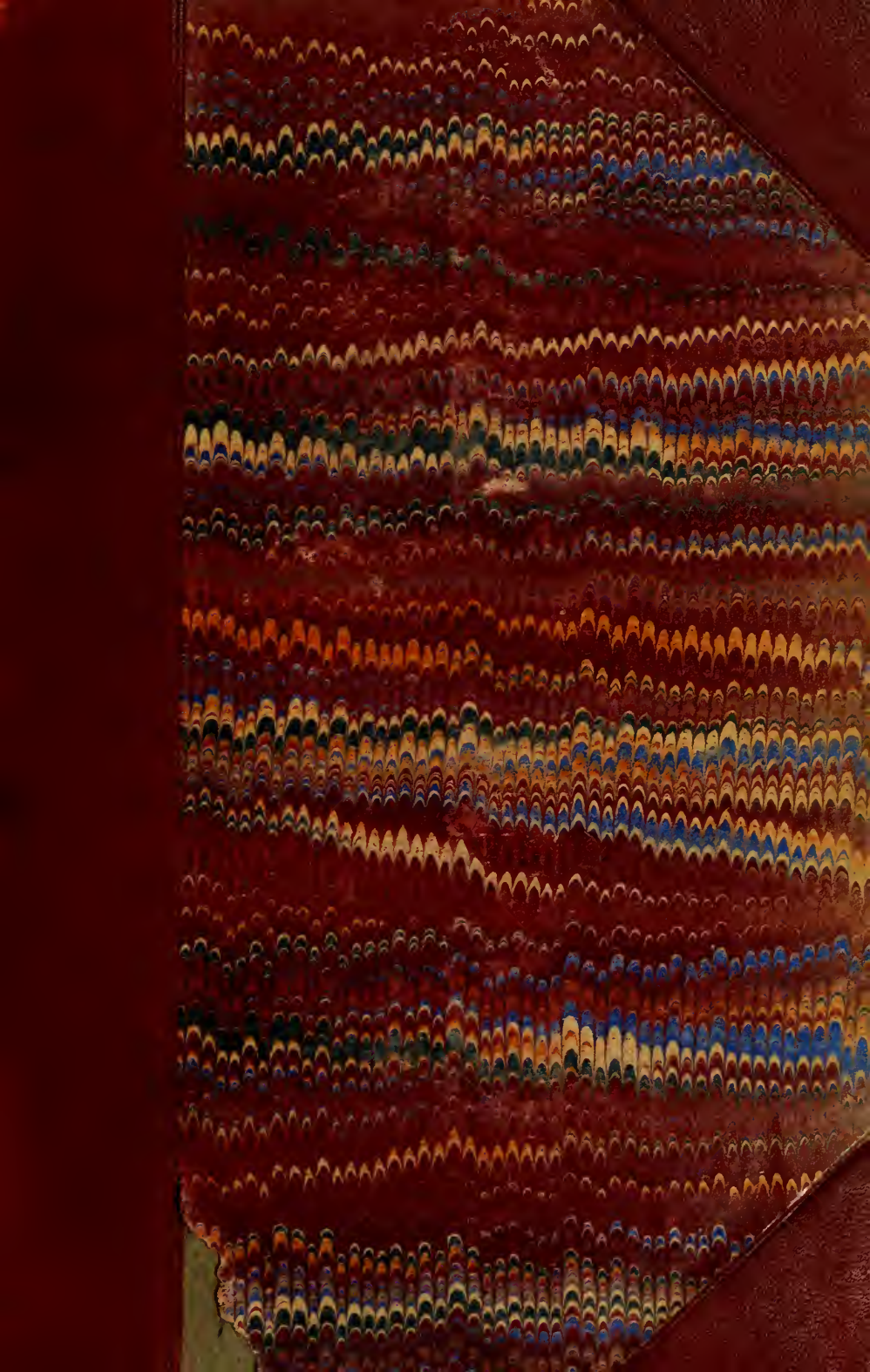




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THOMAS F. WOOD, M.D.



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ORIGINAL COMMUNICATIONS.

ABDOMINAL SURGERY.

Report of the Chairman of the Section on Surgery.

Read before the Medical Society of North Carolina, at Raleigh,
N. C., May 21, 1884.

By L. L. STATON, M.D., Tarborough, N. C.

As Chairman of the Section of Surgery, it becomes my duty to read an essay, the subject of which has given me no little thought.

I deem it pardonable, however, in concentrating my effort upon the all-absorbing subject of the surgical mind of to-day, that of Abdominal Surgery.

Abdominal Surgery may be said to have commenced in 1809, when McDowell operated upon Mrs. Crawford. It is true that long before the Cæsarian section had been performed, colotomy had been done and one or two incisions into supposed ovarian cysts had been accomplished ; so too, wounds of the abdominal wall and of the peritoneum and the contained organs were treated by surgical means ; but when I say that abdominal surgery virtually commenced with McDowell, I say so because I believe that with him

originated an operation, which more than any other, has developed the technique of surgery of the abdomen and has been instrumental in determining the broad principles of treatment which apply to all operations upon the abdomen and its contents. It is a well established fact, that to the gynecologist is due the credit of having extended abdominal surgery to its present dimensions, and ovariectomy—Battey's operation—Tait's operation—The Porro—The Porro-Müller—The Freund's, showed that with care the abdomen can be opened into, with but little risk of death, and with a great relief of symptoms. Other surgeons have not been slow to follow the example set them by the gynecologists as may be seen by the operations of gastrotomy, gastro-hysterotomy, nephrotomy, cholecystotomy and extirpation of the spleen.

Indeed it seems as if there remained no organ in the abdominal cavity which can escape the surgical knife. I have given in another place the history of ovariectomy very fully, for I think that by studying its rise and growth, with its establishment as a surgical operation, we are essentially studying the development of abdominal surgery as a whole. Clay's effort gave ovariectomy a position—Spencer Wells determined what that position was—and ever since its establishment, abdominal surgery has been making great strides. It is only by comparing the surgery of the past year with ten years ago that we are at all able to judge of the advance it has made. During the past decade, the operations of gastrotomy, gastrostomy, gastro-enterotomy, Porro operation, the Porro Müller operation, Freund's operation and myomectomy have been presented to the profession as formal operations, and the older well established operations have been performed with results never before accomplished. It is, of course, interesting, to enquire what circumstances have led to the great revolution in the domain of abdominal surgery. It may be said in general terms that it is due to an increased knowledge of the abdominal technique and under this may be included :

1st.—Care in preparing the patient.

2d.—Attention to the preparation of the instruments and other operative accessories.

3d.—Boldness in opening the peritoneal cavity.

4th.—The complete arrest of hemorrhage.

5th.—The careful and thorough cleansing of the abdominal cavity.

6th.—The use of antiseptics.

7th.—The employment of intelligent drainage.

8th.—The complete union of the peritoneal surface in closing the wound.

The peritoneum has been a terror to surgeons ; its liability to take on inflammation long deterred surgeons from voluntary wounding it, and indeed the frequency of peritonitis among the causes of death in abdominal operations fully justified the reluctance on the part of surgeons to interfere with it. In all operations upon the abdomen where it has been possible to introduce such proceeding, the peritoneum has been left untouched, notably in the instance of nephrectomy and colotomy. But with increased knowledge and experience of later years, it has been found possible to lessen very much the dangers of peritonitis, and in the hands of such men as Keith, Tait and Battey it may almost be ignored as a cause of death. It may be premature to assert it, but certainly the tendency of the present day is to regard the peritoneum as a membrane of most kindly intentions, if it be treated rightly ; and instead of looking upon it as a structure, a wound of which is of the greatest importance, it is rather to be regarded as one of the most ready to heal under circumstances at all favorable. In those operations in which the extra-peritoneal method has been employed the peritoneal method has also been done, and in comparing the statistics of the two it will be found that they favor the former. The percentage in favor of the former is, I think, more apparent than real, and those of the peritoneal method will be improved, as this method is more often employed. I make this statement not in objection to the extra-peritoneal operations, for in certain cases they are undeniably practicable, especially in cases of small tumors to be removed, or where an opening into an abscess or the intestine is to be made, but as the incisions in the majority of cases are through the deep muscles of the back, it necessitates working at the bottom of a deep hole, where it is impossible to judge of the number of adhesions to the condition of the remaining abdominal organs, and where arrest of hemorrhage is difficult. For these reasons, in the majority of cases, the incisions through the anterior wall of the abdomen are to be preferred, as giving a more general view of the field of operation, and with such a method no such disaster as the removal of the only kidney can occur. It will also be seen that operations for carcinoma in an or gan

are much more unfavorable than those for simple tumors of such an organ. Compare the statistics of (1) cancer of the ovaries and ovarian cystoma; (2) gastrectomy for carcinoma and gastrectomy for gastric ulcer; (3) gastrostomy for cancer and for other œsophageal strictures; (4) nephrectomy for carcinoma of the kidney and that for other kidney diseases.

A third point of interest is the rôle played by antiseptics in abdominal surgery. If instead of the word antiseptics we were to say Listerism, it would be easy to determine the position it holds. At the present time but few surgeons employ all of the details of formal Listerism in an operation upon the abdomen—but few surgeons omit to employ some form of antiseptics during such operations. As shown by the history of ovariectomy, the testimony of the majority of operations is very decided in favor of the use of antiseptics in the performance of that operation; and the same remark can be applied to the other operations of abdominal procedure.

Abdominal surgery has made its greatest progress since the establishment of antiseptic surgery, and in the hand of those who have appreciated its principles, if they have not followed the details exactly as laid down by Lister. The spray may be said to be a thing of the past, although in this country both Polk and Lusk use it during the performance of the operation of ovariectomy. The testimony of German surgeons has been particularly positive as to the benefits derived from strict antisepsis. The complete arrest of hemorrhage and the thorough cleansing of the peritoneal cavity are very strongly insisted upon by Keith and Tait. That, I believe, fills the cavity with warm water after the operation has been performed, brings the abdominal walls together, and then rolls the patient's trunk about so the abdominal cavity is thoroughly cleansed and all blood-clots are removed. His insistence upon the complete removal of clots perhaps explains his great success, for he says that to prevent peritonitis it is necessary to remove any material which may undergo putrefaction.

The arrest of hemorrhage is lessened by the use of the Kæberles' forceps, or pincette, which are placed upon every bleeding point and are removed only after the bleeding has ceased, or the vessels have been ligatured. An important point in abdominal surgery, and one in regard to which there is a great difference of opinion, is the value

of the complete closure of the peritoneum can be closed, and as it were septic germs can be shut out.

Spencer Wells has endeavored to show in experiments upon animals that a neglect to approximate the cut edge of the peritoneum was detrimental to the success of the operations. In all abdominal operations, however, the intra-peritoneal method of treating the pedicle has not been the most successful one, especially in the operations of myomotomy and the Porro operation. In this, however, the fault does not lie with the closure of the peritoneum, but in the peculiar condition which prevents the return of the pedicle to the abdominal cavity. In all cases, where it is possible so to do, the peritoneum should be united by a continuous cat-gut suture, and then the abdominal walls united by their own sutures. This is particularly insisted upon by Spencer Wells for another reason—he says that by so doing the presence of an abdominal hernia at the point of incision is prevented later on.

Operation.—The operation is to be performed as follows: The room should be of a temperature of about 80 degrees Fahrenheit; everything needed for the operation should be in the room.

The instruments and sponges should be counted, and no one should be allowed to tear a sponge during the operation.

These are then thoroughly cleansed and disinfected. The patient should be brought into as good a condition as possible before the operation, and on the morning of its occurrence she should have an enema to empty completely the lower bowel. The bladder is also emptied. Sometimes a quarter of a grain of morphine is administered hypodermically just before the ether is given.

After the patient is thoroughly anesthetized the abdomen is exposed, is washed with soap and water and then with some antiseptic wash.

The operator then commences his incisions, beginning exactly in the median line between the symphysis pubis and the umbilicus; he next finds the linea alba and divides everything down to the peritoneum; every bleeding point is secured before the peritoneum is opened, and when the latter is accomplished the sac of the tumor appears. This is usually whitish or grayish white in color, is resistant, and oftentimes shows the evidence of previous inflammations. The hand is now swept gently around the tumor to ascertain if possible its dimensions and whether or not adhesions exist, and if

they be present, to what extent. No attempt is to be made to break up adhesions until after the sac has been emptied; this is accomplished by means of a trochar having attached to it a long rubber tube which empties into a vessel upon the floor. If the tumor be multilocular each cyst must be emptied in turn; this can be accomplished by merely changing the direction of the canula so as to pierce the boundary walls of the cysts.

Great care must be taken not to allow any of the cyst contents to pass into the peritoneal cavity.

The next step is the removal of the sac. This is very easily accomplished if there be no adhesions; but if the latter be present in number the procedure is very much complicated.

Many of the adhesions are readily divided with the fingers; others may be divided with the Paquelin cautery, while others are so dense that the knife is needed in their division.

When the sac has been fully separated upon all sides the pedicle is reached, and this may be treated by any of the following methods, i. e.: 1. The clamp. 2. The ligature. 3. The cautery. The relative merits of these several forms of treating the pedicle have been discussed fully, and it is only necessary to say here that that method which allows complete closure of the peritoneal and abdominal muscular surfaces is the one to be advocated.

After the removal of the sac and the return of the pedicle to the abdominal cavity, close search is to be made for bleeding points, especially in the adhesions, the hemorrhage must be stopped absolutely by either the ligature or the actual cautery; this done, the abdominal must be cleansed, its "toilette" made by removing all clots and fluid blood, and then the abdominal walls can be brought together. The most approved method is to first unite the edges of the peritoneum with the Lembert's suture; this suture is usually of cat-gut. The abdominal walls are then brought together by three or four deep sutures, preferably of silver wire, a number of more superficial ones of silk. Lastly, the integument is to be stitched together with a continuous silk suture.

Personally I believe the quilled suture to be the one best adapted in the employment of the deep silver wires.

After the approximation of the abdominal walls an antiseptic or compound gauze dressing is applied, and a sufficient quantity of opium administered to relieve pain.

The after treatment entails absolute rest, freedom from pain and complete antisepsis of the wound.

GASTROTOMY FOR MYOFIBROMATA OF THE UTERUS.

This operation is one which is attracting the attention of gynæcologists at the present day in an imperative manner. The removal of myofibromata of the uterus may be accomplished through the vagina; it is only when they are very large that they are removed by abdominal section.

The operation is one of comparatively recent date, and has become established as an operation by the efforts of Pearn, Hegar, Billroth, Kaltenbach and Schræder.

Bantock applies to the operation the term Hysterectomy. Schræder calls it Myomotomy. Pearn calls it Hysterotomy. The operation may be limited to the removal of the tumor alone, or if the tumor be not easily enucleated, the uterine body is removed with the cervix usually being left behind.

Methods of Operating.—The usual incision having been made through the median line of the abdominal walls, the tumor with the uterus is drawn out of the abdomen. A sound is then introduced into the bladder to ascertain its relations, and the cervix is transfixed with two strong wire ligatures at right angles. Below these a curved needle is passed through the cervix, bringing back a double wire. This is then divided and each half is twisted. The tumor and uterus are amputated above the wires. The pedicle is left in the lower angle of the wound, the wires with it.

Some operators drop the pedicle into the abdominal cavity, and perform thus the *intra-peritoneal* operation. There are thus two methods of treating the pedicle, as in ovariectomy, the intra and the extra-peritoneal methods.

The following statistics of the operation are taken from Bigelow's paper upon the subject, published in the *American Journal of Obstetrics*, November and December, 1883:

"The tumor alone removed 106 times—50 recovered, 50 died.

"The tumor and uterus removed 229 times—124 recovered, 94 died.

"Extra-peritoneal cases 247 times—143 recovered, 97 died.

"Intra-peritoneal cases 84 times—50 recovered, 33 died."

Of individual records, those of Bantock, twenty-two cases, twenty recovered, and Hegar, twelve cases, eleven recovered, are the best.

It will be seen that the mortality is greater than that of ovariectomy, although single records give very good statistics. Bigelow gives it as his opinion that the operation, with further experience, will equal in its statistics those of ovariectomy.

Dr. Schröder says that the burning question of the day is not of ovariectomy, but of myomectomy. The dispute is confined to the extra and intra-peritoneal methods. The latter success of Schröder by the intra-peritoneal operation has been brilliant. He lost one case in fourteen.

The extra-peritoneal method, however, is the favorite one at present, and the general statistics rather favor this mode of operating than by the other methods.

HYSTERECTOMY.

The term Hysterectomy means removal of the uterus. The word is, however, very loosely used, and, according to Bantock, "Hysterectomy means the removal by abdominal section of a fibroid or fibro-cystic tumor of the uterus, whether involving a part or the whole of the body of the uterus."

If the term be used in this restricted sense other names would be invented to designate the entire removal of the uterus for carcinoma and the operation of Porro and Porro-Müller above described; both of these are hysterectomies in the broadest sense of the term.

The removal of the entire uterus is usually performed for carcinoma of that organ.

Two methods present themselves for consideration :

1. Vaginal Hysterectomy.
2. Abdominal Hysterectomy or Freund's operation.

The vaginal method is the older, and according to Fenger, was first performed in this century by Langenbeck, and after that by Hæsecher, Siebold, Lizars, Bauer, Récamier, Blundell, Delpech, Roux, Eve and Czerny.

Fenger, of Chicago, published in 1882 a successful case.

The operation is performed with the woman lying upon the back in the lithotomy position. The vagina is dilated and the uterus is drawn downwards, and the surrounding parts, the rectum and the bladder, are carefully dissected away with a blunt instrument or with scissors—all bleeding vessels are carefully ligated. When the

broad ligaments are reached a ligature is thrown around each one. The ovaries and Fallopian tubes are left if they be healthy. The uterus is then removed. The wound in the peritoneum is sewn up with cat-gut and a tampon is placed in the vagina.

Gross says that Dr. C. Fenger, of Chicago, is entitled to the credit of introducing it (i. e., this operation) to the notice of the profession in this country.

The second method of operating is known as abdominal Hysterectomy, or Freund's operation, because it was first performed by Prof. Freund, of Strasburg, in 1878.

It consists in the removal of the entire uterus by dissecting the anterior surface of the cervix from the posterior wall of the bladder, dividing the broad ligament on each side of the uterus, as well as the peritoneum behind the cervix which connects it with the rectum, and then uniting the cut edges of the peritoneum by means of sutures, and so reclosing the peritoneal cavity.—(Barnes and Garson.)

The incision in this case is the same as that for the removal of an ovarian tumor. It seems difficult at present to decide which is the preferable operation.

The statistics of vaginal hysterectomy are as follows :

"Fenger's statistics—45 cases, 31 recoveries, 11 deaths, 3 unfavorable.

"Schwartz' statistics—55 cases, 35 recoveries, 20 deaths."

The abdominal hysterectomy does not furnish as favorable statistics, viz :

"Abhfed, 66 cases, 49 deaths.

"Kleinwachter, 94 cases, 20 recoveries.

"Kaltenbach, 88 cases, 30 recoveries."

The latter operation is the newer operation, and has not yet obtained the benefit which time and experience will furnish it.

It seems to be a general law of abdominal surgery that that operation which admits of reaching the seat of disease the most readily is the preferable operation. Usually such an operation is performed by an incision through the anterior abdominal wall—almost always through the linea alba and then by division of the peritoneum.

Such an incision allows a larger view of the seat of operation, gives readier access to the diseased organ and admits of gentler manipulation. It is true that the peritoneum in such a case is always

wounded, and the danger of peritonitis is thereby inverted. But this danger is a small one compared with other risks which may be involved by other methods of operating, and the experience of modern surgery goes to show that with careful precaution peritonitis is by no means as much to be dreaded as it was in former years. I have no doubt that in the years to come abdominal hysterectomy will be the better operation :

1. On account of the reasons above given.
2. Because when the tumor is very large or the vagina small and non-dilatable, it is almost impossible to remove the uterus per vaginam.

CÆSARIAN SECTION.

This term is applied to the removal of a fœtus through the abdominal walls when it cannot be delivered by the natural passages.

The term is sometimes more loosely used, and is extended to include those cases in which a laparotomy has been performed to remove the fœtus from a ruptured uterus or to relieve an extra-uterine pregnancy.

It is said that the name Cæsarian section is derived from the fact that Julius Cæsar was delivered by abdominal incision.

Dr. Harris, of Philadelphia, who has collected the most useful and reliable statistics upon this point, says that the operation cannot be traced further back than five centuries. The first operation was performed in this country in 1827 ; up to the present time it has been performed one hundred and twenty-four times in this country ; in Great Britain one hundred and thirty-four times, and in Italy about two hundred and fifty times.

The operation is performed by making an incision in the median line of the abdomen, finding the linea alba dividing the abdominal walls and peritoneum. The uterus being brought into view, an incision is made in it long enough to allow extraction of the child and placenta. The uterus is then sewed up, its contraction assured, and the abdominal wound is then closed and dressed.

The mortality of this operation has been so great that it has been entirely superseded by a modified operation introduced by Porro, of Milan, and known as the Porro operation, as he styled it, "Utero-ovarian amputation as complete of the Cæsarian operation."

This modified operation has been further modified in nine various

ways, as detailed by Harris. The only one which demands serious attention is that of Müller, of Berne, which is known as the Porro-Müller operation.

The Porro operation is as follows :

The old operation is to be first performed, the fetus removed and the uterus made to contract ; then the plan is radically changed ; the uterus is drawn through the abdominal wound ; its neck is ligated by a wire constrictor tightened by screw power ; the organ is cut away above the loop, and the stump is secured in the lower angle of the wound.

The design of this change is to avoid the possibility of the escape of post partum uterine fluids into the abdominal cavity and the dangers consequent thereupon, by converting the uterine wound, with its disposition to gape open, into an open stump external to the body and discharging externally under antiseptic dressings.

The modification of Müller is to make an incision in the abdominal wall that is long enough to admit of the uterus being drawn through it, the wire constrictor is put in and screwed fast, and *then* the uterus is opened and the child is removed, and then the uterus is amputated.

The old Caesarian operation was very fatal, especially in Europe.

Bruden, in 1873, stated that out of 50 cases performed upon in Paris during a space of eighty years not one recovered.

Of one hundred and thirty-four operations in Great Britain, only twenty-four women and seventy-eight children were saved.

Of one hundred and thirty-three operations in North America, sixty women were saved.

The later modifications show much better results than those of the old operation. Quoting from Harris: "Thus it appears * * * * that the Porro operation carried out as originally designed has saved 46 14.41 per cent. of the cases ; the Porro-Müller method, unmodified, has saved 52 16.17 per cent. and the two combined 48 8.29 per cent. of the women and ninety out of one hundred and eighteen children."

SPAYING.

This is ovariectomy in miniature. The term is restricted to the removal of normal ovaries, or those in which the morbid changes have caused but little enlargement of the organs.

In a certain number of cases it is difficult to determine whether the operation be an ovariectomy or merely spaying.

In spaying both ovaries are usually removed. The operation, which is also known as Oöphorectomy, was first performed in 1872 by Prof. Hegar, of Germany; five days later by Lawson Tait, of Birmingham, England, and still later by Battey, of Georgia.

The operation is oftentimes called Battey's operation, as he made it by his labors and success a recognized and justifiable operation. As originally performed by him, an incision was made through the vagina at the bottom of Douglas' cul de sac, the ovary was drawn out, the pedicle ligated and it was then removed.

The operation was modified later on, by making an incision in the abdominal wall; so that here we have two methods of operating, the vaginal and abdominal.

In almost all cases in the present time the abdominal form of procedure is used, and it is interesting to note that Battey himself practiced it in the majority of his last series of published cases.

The mortality by either methods has been about 18 per cent. This is improving. The records of single operations gives much better percentum of recoveries.

The question which is now under discussion is not so much the fatality of the operation, as whether or not the results accomplished justify so radical and dangerous a method of cure.

It cannot be said that this question has been satisfactorily answered up to the present time. The operation is still being performed, and the gynecological world seems to be waiting to give it a fair trial before passing judgment upon it.

OVARIO-SALPINGECTOMY, OR TAIT'S OPERATION.

This operation performed by Lawson Tait is an Oöphorectomy with the addition of the removal of the Fallopian tubes. The operation has been performed by Tait thirty-one times, and was done for the cure of obstinate menorrhagia.

The mortality of these operations has only been 7.701 per cent.

STOMACH.

The operations upon the stomach are three in number :

1. Gastrotomy.
2. Gastrostomy.
3. Gastrectomy.

And fourth, perhaps, what is known as Gastro-Enterostomy.

Stimson* says this operation was first performed in 1602 to remove a knife blade from the stomach of a man. It has been done twenty times since—eighteen recovered, two died—both from peritonitis.

1. *Gastrotomy*.—This term is applied in a general way to any incision into the abdominal walls, but in a more restricted sense is used to mean an incision into the stomach. The incision is most often made for the purpose of removing some foreign body, and is only a temporary one, to be closed up after the removal of such a foreign body.† When the opening into the stomach is to be a permanent one the operation is designated as a ———.

2. *Gastrostomy, i. e., a Stomach Mouth*.—This operation is performed for the purpose of introducing food into the stomach when, for any reason, usually impassable stricture of the œsophagus, it cannot enter in the normal manner.

The most frequent causes of stricture of the œsophagus is cancer of that organ, while traumatism, from the injection of acrid poisons, or from wounds, is also instrumental in forming impassable strictures.

The operation is to be performed as follows: The incision is to be made upon the left side of the median line, parallel with, and one inch from, the left costal cartilages. The lower end of the incision is to terminate near the costal cartilage of the eleventh rib, and this rib can be distinguished easily because it normally crepitates.

After opening the peritoneum the stomach is to be seized and brought to the opening. If it be possible, no air is to be allowed to enter the peritoneal cavity. The stomach having been found and the *greater curvature* brought to the opening, it is stitched fast to the abdominal parietes.

The stitches are usually arranged in two rows and penetrate only the peritoneal and muscular coats.

The stomach may be opened immediately, or better still, after a lapse of five days. It is recommended to wait this length of time in order to secure adhesion of the viscus to the abdomen, and in this way lessen the dangers of peritonitis.

This operation was first performed in 1849 by Sédillot, and up to 1883 it had been performed ninety-three times, seventy-five times for cancer and eighteen times for cicatricial closing from other causes.

Cancer cases—fifty-four died within three weeks after operation; twenty lived three weeks to eight months; two or three still living.

* These statistics are given by L. A. Stimson in the *New York Medical Record*.

† The causes of death are peritonitis, exhaustion and the shock of the operation.

Cicatricial cases—eight died from operation, ten recovered.

Albert published in the *Centralblatt für Chirurgie*, 1823, ten cases, five deaths and five recoveries.

The first twenty-eight cases of operation died suddenly, the twenty-ninth was done by Sidney Jones and lived forty days.

It will be seen that the mortality in this operation is very large; but “Gastrostomy is in reality not a hazardous operation, the apparently high mortality attending its performance being due to the fact that in the majority of recorded cases it was resorted to when the powers of the patient were greatly exhausted.”—*Gross*.

As in all operations for malignant diseases, as compared with those for non-malignant diseases, the statistics here are much in favor of those performed for traumatic stricture of the œsophagus.

3. *Gastreotomy*—Is the removal of the stomach; the term is restricted to the removal of a portion of the stomach, usually the pylorus; in other words, it is the same as resection of the pylorus. This operation was first performed in 1879 by Pearn, on account of carcinoma of the pylorus; since then it has been performed sixteen times, five times by Billroth. Of sixteen cases twelve died and four recovered.

The operation has been performed twice for perforating gastric ulcer; once by Rydygier and once by VanKleepe; both were successful.

In view of the fact that the operation is merely a palliative one, it is doubtful whether the benefits obtained in the minority of the cases justify the great mortality of such an heroic procedure.

The operation consists in removing the cancerous mass and in uniting the duodenum to the stomach.

In some cases it has been found to be impossible to remove the cancerous mass, owing to adhesions, and under such circumstances other procedures are resorted to.

Langenbach practiced duodenostomy, i. e., attached the first portion of the duodenum to the abdominal walls, as in gastrostomy.

Wälfer made an incision into the stomach near the middle of the great curvature and a similar cut into the jejunum and carefully united the opening by sutures. This operation he termed gastro-enterostomy. The patient was relieved by it. A case done subsequently by Billroth died.

OPERATIONS UPON THE SMALL INTESTINES.

The operations upon the small intestines are :

1. Enterotomy.
2. Enterectomy.
3. Laparotomy.

In cases of intestinal obstruction from intussusception, volvulus or fecal impaction, it is impossible to open the abdominal cavity and in certain cases relieve the morbid condition. The greatest success attends those cases where the obstruction depends upon a twisting of the intestine or an internal hernia.

The mortality of this operation has been excessive, and it is always a question whether it is even a justifiable operation. The tables of Ashhurst give the following results :

Thirteen cases of abdominal section to relieve intussusception, eight died, five recovered.

Fifty-seven cases for acute intestinal obstruction from causes other than invagination, eighteen recovered, thirty-nine died.

Adelmann has collected the results of abdominal section in thirty-three cases of acute obstruction from various causes. Fifteen recovered and eighteen died.

In Ashhurst's cases of invagination four were in children under one year of age, all of whom died. It is said that invagination of the intestines, with or without operation, is very fatal in young children.

When the signs of severe strangulation are present (namely, hemorrhage and peritonitis) an operation is contra-indicated.

2. *Enterotomy*—Is sometimes demanded for the removal of foreign bodies from the intestines. The details of the operation do not differ from those of gastrotomy, except that the incision through the integument is to be made over the seat of the foreign body if its position can be accurately determined.

3. *Enterectomy*, or resection of the intestine, is the removal of a portion of the intestinal track for stricture, or for other diseases, oftentimes for gangrene. After the diseased portion has been removed, the ends of the intestine are to be united together by suture.

This operation has been performed by Kœberle, Rydygier, Von Wahl, Rose and others. The statistics of this operation are not available.

In this country in cases of hernia strangulated to sloughing, it is the

usual procedure not to resect the intestine, but instead to form an artificial anus at the point of incision.

COLOTOMY.

By colotomy is meant the opening of the colon at any point in its course. The term usually means the forming of an artificial anus in the left lumbar region.

The operation of colotomy was first performed in 1783 by A. Dubois, although it had been proposed by Littré in 1710. The operation was performed upon a new-born child for imperforate anus—the child died ten days later. The second operation was by Duret, in 1793, and was successful; it was performed for the same purpose as that by Dubois.

These operations were both performed upon the left side in the inguinal region, dividing, during the procedure, the peritoneum. The operations which followed these were done in the same manner, but as peritonitis was a fruitful cause of death, Colbein suggested that the colon be incised from behind at that point not covered by peritoneum. This suggestion was not acted upon until 1841, when Amussat operated successfully in this manner, performing for the first time the extra-peritoneal or lumbar colotomy.

Various modifications of colotomy have been introduced. The bowel may be opened upon the right side.

Dupuytren, in 1818, opened the cæcum, and Von Thaden opened the colon upon the left side, thus making a “lateral colotomy.”

The operations for imperforate anus have so much improved of late years that colotomy, as a means of relief in such cases, has been almost entirely discarded.

The operation is limited at the present day almost entirely to relief of carcinoma of the rectum. Of course the operation is merely palliative.

Amussat's, or the extra-peritoneal operation is the one most often performed, although now-a-days with the boldness in opening the peritoneum, engendered by success in the other branches of abdominal surgery, surgeons are looking with favor upon the inguinal method of operating.

The operation is performed as follows :

The patient lies upon the belly over a hard cushion, so that the spinal column is curved backwards.

An incision is then made midway between the last rib and the crest of the ilium, running horizontally and having for its centre the lateral border of the quadratus lumborum. The incision is carried through the external oblique, the internal oblique, the aponeurosis of the transversalis and the border of the quadratus lumborum. This incision opens into the retro-peritoneal fat tissue, when the colon is easily found.

The colon is then stitched fast to the edge of the wound ; it may be opened at the time of operation, or the opening need not be made until inflammatory process has made the colon fast at the points where it has been sutured.

The statistics of this operation have not been published since 1879. At that time Van Ercelens published the results in two hundred and sixty-two cases, compiled from various sources. His results were as follows—cases 26 :

Amussat's operations one hundred and sixty-five—one hundred and one recovered, sixty-three died.

Littre's operations eighty-four—forty-four recovered, thirty-nine died.

Unknown operations thirteen—seven recovered, six died.

The operation is performed often, and the journals contain many accounts of cases operated upon. Indeed, the operation is often performed without the details of the case being published, a fact which undoubtedly demonstrates that it has lost its novelty and is relegated to the position of an operation regarding whose justifiability there is no longer room for debate.

COLECTOMY.

Colectomy is the excision of the colon for obstruction in that organ ; heretofore it has always been performed for malignant diseases. It was first done in 1833 by Reybard, of Lyons, and has been done in all eight times—three died, five recovered.

Marshall, in a monograph upon this subject, concluded that the operation of colectomy is not to be lightly undertaken ; but it may nevertheless be predicted of it that it will take a place in surgery.

In the majority of the successful cases only one incision was made into the abdominal cavity ; in the unsuccessful cases more than one was made. The single incision was rendered possible by an ability to correctly diagnose the situation of the tumor before the opera-

tion ; in the other cases it was impossible to locate its exact position. After resection of the colon five of the operations were completed by union of the ends of the colon by suture or enterrihaphy, and in the remaining three an artificial anus was formed.

Colectomy is only justifiable when the tumor is small and the surrounding tissues not involved ; in all other cases colotomy is to be preferred.

OPERATIONS UPON THE KIDNEYS.

The kidneys are sometimes wounded or ruptured, and operative interference is necessary to remove the contused tissue or blood-clots ; and to drain the cavity which contains this broken-down tissue. So, too, inflammatory condition of the kidney or a perinephritic abscess may produce a discharge of pus externally through the abdominal wall, forming in this way chronic sinuses which necessitate cleaning them out at times.

The formal operations upon the kidneys are two in number.

1. Nephrotomy, or an incision into the kidney.
2. Nephrectomy, or removal of the kidney.

1. Nephrotomy is performed in abscess of the kidney. The abscess may be perinephritic or pyonephrotic ; when the latter is the case the underlying cause in the majority of cases will be found to be a renal calculus.

The object of the operation is to make a free opening for the escape of pus, and if there be present a calculus, to remove it.

In operating an incision is to be made similar to that made in colotomy, care being taken to go in *behind* the peritonæum. The tumor is found presenting after the incision has been completed. The pus being excavated, the cavity is thoroughly disinfected, drainage tubes are inserted and the opening is dressed with an anti-septic dressing. Sometimes the kidney is stitched to the wound.

Gross gives the following statistics : Forty cases—thirty-two recovered, eight died.

“It has been uniformly successful when practiced for calculus of an otherwise healthy kidney, and for hydronephrosis, while the mortality has been 18.75 per cent. for suppurating kidneys and 62.50 per cent. for calculous pyelitis.”

2. Nephrectomy, or the removal of a kidney, was first performed formally by Simon, of Heidelberg, in 1869. The operation was successful.

Since that time the operation has been performed for tumors of the kidney, wandering kidney, pyelitis, cysts and calculus of the organ.

Gross has collected one hundred and four cases. Fifty-two recoveries, forty-six died, six still under treatment.

In extirpation of the healthy kidney the best results have been obtained, viz: Twenty-four cases, eighteen recovered, six died. Since the publication of these statistics eight or ten cases more have been published, four from New York surgeons—Wylie, Wright, Polk, Weir. The statistics remain about the same. Polk's case died after ten days with symptoms of uræmic poisoning; a post mortem examination revealed that the patient had possessed only one kidney, which had been removed. The occurrence of this anomaly must be taken into account when operating for the removal of the kidney, and the presence of a second kidney must be absolutely determined before the diseased kidney is removed.

The operation is performed by one of two methods:

1. Through the loin.
2. Through the abdominal wall.

The original operation was that through the lumbar region, by an incision similar to that in lumbar colotomy. By this method the peritoneum was not wounded and good drainage assured.

But the depth of the wound, its small size and the fact that by such an incision the condition of the other kidney could not be ascertained, led to the adoption of the anterior or abdominal incision, which is now most often practiced.

It is true that the statistics favor the operation through the lumbar region, but it seems to me that with more experience in the abdominal operation the statistics will be equally good.

In the abdominal operation the best incision is that at the outer edge of the rectus muscle; after cutting through the peritoneum the intestines are to be held aside, and then a *second* layer of peritoneum is to be incised. The kidney is to be carefully dissected up from its capsule, the ureter and blood-vessels ligated, and the kidney removed.

The success of the operation depends upon the employment of thorough antisepsis.

OPERATIONS UPON THE SPLEEN.

For wounds of the spleen or ruptures of it, the operation of

splenotomy is to be performed, that is, to cut off the portion of the viscus which is contused, to restore the remainder to the abdominal cavity and then to leave an opening in the abdominal wall for drainage.

This operation has been performed about thirty times with a mortality of 50 per cent.

A curious operation upon the spleen was performed in 1855 by Dr. Dorsey, of Ohio. His patient was a farmer forty years of age, who had long suffered with violent pains in the region of the spleen. Finding the viscus to be large and adherent, he broke down the adhesions and restored the organ to what he conceived to be its normal position, and the man recovered his health.

Splenectomy is the removal or extirpation of the entire spleen.

It is usually stated that this operation was first performed in 1549 by Dr. Zaccarelli, of Naples, upon a woman twenty-four years of age, and with success. Great discredit has been thrown upon the account of this operation by Franzolini, and by Harris, and it is extremely doubtful if such an operation was ever performed.

Cred says the spleen is to be removed for two conditions :

1. For wounds.
2. For morbid changes in it.

Harris reports thirty-seven cases (authentic) removed up to the present time. Of these, seven recovered, or less than 19 per cent.

Nineteen cases were leucocythæmic spleens—eighteen died ; the remainder were cases of simple hypertrophy ; of these six recovered.

The only successful case of removal of a leucocythæmic spleen was performed by Franzolini, of Italy, in 1881.

THE RELATION OF THE MEDICAL PROFESSION TO MODERN SCIENCE.

Annual Oration read before the Medical Society of North Carolina,
at Raleigh, N. C., May 21, 1884.

By JULIAN M. BAKER, B.S., M.D.

Mr. President, fellow-members of the Medical Society of North Carolina, ladies and gentlemen :

Since the first evidence of intellectual activity of the human race, the mind of man has busied itself with the consideration of certain questions regarding his own existence, which in our time, with all our boasted civilization and enlightenment, are still unanswered to

the satisfaction of every one. Ancient philosophers put forward many systems by which, for a time, man's origin, his mission and his place in nature were determined. Modern philosophers grapple with the same problems with the advantages of accumulated experience and a higher degree of intellectual culture. It is natural that, to the medical profession, which has such intimate relations with life, in its varied aspects, some degree of authority should be ascribed, and upon the members of that profession certain duties imposed in regard to the solution of the disputed questions. For an intelligent conception of this relation and our duties in regard thereto, a consideration of modern philosophical ideas and scientific facts is necessary, so that, with this knowledge, an appeal may be made to our own reason, independent of the fanaticism of this or that particular system.

In that mythical period of the world's history preceding the birth of Christ, an anthropomorphic notion of the "Beginning of things," seems to have prevailed. A few individuals soon appeared, who, differentiating themselves from the masses, and following that impulse inherent in man to inquire into the source of natural phenomena, were impelled to scientific action. At the time when the civilization and enlightenment of ancient Greece dawned upon the world, when the commercial aristocracy had amassed wealth, and there was leisure for trial; when the wars of Greece and Persia called forth all classes of men to battle, not only with a human foe, but with the forces of Nature, which opposed their long and perilous marches through a strange country, the latent germ of science developed itself.

Men of bold and exceptional power began to see the folly of their anthropomorphism.

The state of things to be displaced to give this germ, just sprung into existence, a firm foundation, may be gathered from a passage of Euripides, translated by Hume: "There is nothing in the world—no glory, no prosperity. The gods toss all about in confusion, mixing everything with its reverse, that all of us from our own ignorance and uncertainty may pay them the more worship and reverence."

Following the campaigns of Alexander, mathematical schools were established at Alexandria. Democritus advanced the doctrine of atoms and molecules, and its partial acceptance at that time

checked the progress of that system which ascribed the phenomena of Nature to the caprices of the gods. Some of these principles have, however, been handed down to us and exercise some influence upon the course of modern thought. The doctrine of evolution is the embodiment of scientific facts, ancient and modern. It is the resultant of contending philosophical systems from the beginning of man's intellectual activity till now. It is a product of the scientific researches of our own generation, and in its gradual development, from the ideas of the ancients to its present condition of comparative perfection, its own principle of "The survival of the fittest" is exemplified.

We will then consider some of these ancient philosophies, and notice the stages of its development from them, after which we will analyze evolution, as at present propounded by leading scientific men, and lastly, consider what the medical profession should do in regard thereto.

It was held that "To construct the universe in idea" it was necessary to have some notion of its constituent parts, and this formed the basis of the "First Beginnings," from which Democritus abstracted by experience the "Pregnant Doctrine of Atoms and Molecules." This laughing philosopher was held in high esteem by Bacon, and "No philosopher," says Lange, a non-materialist, "has been more despitely used by history!" The principles of his philosophy denote an "Uncompromising antagonism to those who deduced the phenomena of Nature from the caprices of the gods!"* They were, "From nothing comes nothing; nothing that exists can be destroyed; all changes are due to the combination and separation of molecules; nothing happens by chance, every occurrence has its cause, from which it follows by necessity; the only existing things are atoms, and molecules, and empty space—all else is mere opinion; atoms are infinite in number, and infinitely various in form; they strike together, and the lateral motion and whirling, which thus arise, are the beginning of worlds. The variety of all things depends upon the variety of atoms; the soul consists of fine, smooth, round atoms, like those of fire. They are the most mobile of all. They interpenetrate the whole body, and in their motion give rise to the phenomena of Life."† The construction of the human body he made no attempt to solve.

* Lange's History of Materialism.

† Tyndall's Address at Belfast.

Epicurus next rises as a prominent figure. The fragments of his philosophy which have come down to us, do him great injustice. He attempted to inculcate other principles than "Live while we live, for to-morrow we die." He affirmed that Nature pursues her course according to everlasting laws, the gods never interfering. He adored the gods, but his main object was to free the world from the fear of death: "As long as we *are*, death *is not*, and when death *is*, we are *not*." His relation to the gods Lange considers subjective: "The indication," says Tyndall, "of an ethical requirement of his nature; nor can we read history with an open eye, or study human nature to its depths, and fail to discover such requirement. Man never has been and never will be satisfied with the operation of the understanding alone; hence physical science can never cover all the requirements of his nature."

Lucretius, a century and a half later, wrote his great poem on the "Nature of Things," and, in attempting to convert his friend Memnius to the school of Epicurus, maintains by vivid scientific imagery the principles of his great forerunner. "This terror," he says, "and darkness of mind must be dispelled, not by the rays of the sun and the glittering shafts of day, but by the aspect and law of Nature." The first beginnings—the atoms—are indestructible, and into them all things may be resolved at last, the mechanical shock of the atoms being, in his view, the all-sufficient cause of things." He combats the notion that the constitution of Nature has been determined by intelligent design. The inter-action of atoms through infinite time rendered all manner of combinations possible. His conception of atoms falling eternally through space suggested to Kant (its first propounder) the nebular hypothesis: above, below, behind us are worlds without end; and this, when considered, must dissipate every thought of a deflection of the universe from the gods."*

During the period in which these philosophers lived the learning of Athens had dawned upon the world. The sophist had risen, held a temporal sway and given place to Socrates, Plato and Aristotle. Thales, Anaximenes and Diogenes had attempted to determine the first principle, and identified it with fire and water—had laid the foundation of Psychology, Biology, Cosmogony and Astronomy, but ended in doubting a criterion of truth. The museum of Alex-

* Tyndall's Address at Belfast.

andria had been founded, Euclid had written his elements and Archimedes had invented his lever and propounded the principle of Hydrostatics. Pythagoras had made his experiments on the Harmonic intervals, while Hipparchus and Ptolemy had made great additions to Astronomy. Anatomy was made a basis of Medicine, and here vivisections first began. Inductions and experiments replaced accidental observation in determining ultimate causes.

The Greek philosophy aimed at determining four questions :

1. "The existence and attributes of God."
2. "The origin and destiny of the World."
3. "The nature of the Soul," and
4. "The possibility of a criterion of Truth."

The second question, "The origin and destiny of the World," has the most direct bearing upon our subject, and was settled, says Draper, thus: "The origin of all things is God, of whom the world is only a visible manifestation. It is evolved from Him, and by Him, perhaps as the Stoics delighted to say, as the plant is evolved by and from the germ in the seed."* This doctrine of emanation reposing on the assertion that the world existed eternally in God, that it came forth from Him, and will be hereafter absorbed by Him, was the basis of the Greek and Oriental philosophies. It was engrafted in their religion, and, with some modification, is still held in repute.

With the decline of the Greek philosophy an age of intellectual decrepitude marks the progress of scientific culture, the course of which has been variously estimated, Whewell ascribing it to "Obscurity of thought, servility, intolerance of disposition, enthusiasm of temper."† Rome had fallen into moral putrefaction ; Christianity had risen, protesting against the profligacy of the age. The early Christians scorned the earth and accepted the Scriptures, which administered to their spiritual needs as their measure of science. As to the question of antipodes, the Bible was the ultimate source of appeal. Augustin would not deny the rotundity of the earth, but denied the possibility of the other side being inhabited. Archbishop Bonifacius was shocked at the idea of a race of "human beings out of the reach of salvation ; no such race is recorded in Scriptures among the descendants of Adam."

* Draper's "Intellectual Development of Europe."

† Ibid.

† Whewell's "History of Inductive Science."

Then came the mysticism of the Middle Ages, magic and alchemy. The undeveloped intellectual power of many potential philosophers was exhausted in the vain search for the Philosopher's Stone. The neo-Platonic philosophy, "with its sublime abstractions, which caused men to look with shame upon their own bodies as a hindrance to the absorption of the creature in the blessedness of the Creator." Then came the scholastic philosophy, "A fusion," says Lange, "of the least mature notion of Aristotle with the Christianity of the West." During this drought of the Middle Ages the Arabian intellect was active, and left a marked impress on modern science, as portrayed by Draper. The most prominent among these Arabian philosophers being Alhazan, who made many experiments in physics and was the first to correct the Platonic notion that "rays of light are emitted by the eye." He explained twilight, and in his "Book of the Balance of Wisdom" sets forth the connection between the weight of atmosphere and its increasing density. Europe is under great scientific obligations to the Mohammedans.

At last the spirit of investigation, directly by Nature, began to creep into philosophy. The revival of learning had commenced—Martin Luther had appeared. The chains of monastic rule were broken and the spirit of freedom which was thereby given in ecclesiastical affairs fostered a like spirit in other relations of life. The spirit of the age seemed to be that "not unto Aristotle, not unto subtle hypotheses, not unto the Church, not unto the Bible nor blind traditions must we turn for a knowledge of the Universe, but to the direct investigation of Nature." Copernicus traced the paths of the heavenly bodies. The closed universe of Aristotle, with the earth for its centre, disappeared. The "earth moves" became a watchword for intellectual freemen.

The Italian philosopher, Bruno, was among the first converts to the new Astronomy. He revived the notion of the infinity of worlds. Pondering on the doctrine of maintenance and generation of organisms, he came to the conclusion that "Nature in her productions does not imitate the technic of man. Her process is one of an unraveling and unfolding. The infinity of forms under which matter appears was not imposed upon it by an external artificer, but by its own intrinsic force and virtue it brings these forms forth. Matter is not the mere *empty capacity* which philosophers have pictured her to be, but the universal mother who brings forth all

things as the fruit of her womb." For these sentiments Bruno was accused of heresy, found guilty, and on February 16th, A. D., 1600, was burned at the stake. Galileo abjured upon his knees the heliocentric doctrine in order to escape a similar punishment. Thirty-three years later Kepler defied the powers of the Inquisition from his mountain stronghold, and traced the law of planetary motion preparing material for Newton, who "bound these empirical laws together by the principle of gravitation." Bacon and Descartes restored in the seventeenth century the philosophical speculation which had been dormant for so long. Bacon held fast to Induction, and considered experience the basis of all knowledge, Descartes to Deduction. He followed Protagoras and made the individual man the basis of all things. "He was the first to reduce," says Tyndall, "vital phenomena to purely mechanical principles."

Following this suggestion, Lamarek, about the beginning of this century, concluded that all forms of life, including man, are descended from others. Geoffrey St. Hilaire had hinted at a similar idea in 1795, but it did not assume definite shape. Since this time, by slow and steady advances, each step forward, struggling to maintain itself, has this doctrine developed. Wells, Grant, Owen and Matthew, all eminent scientists in their time, added a little to already existing facts. Herbert Spencer, Darwin, Wallace, Huxley and Von Bær, since 1850, have labored unceasingly to establish by facts that which in theory they believed to be true.

So, through all time, has there been opposing philosophies, and the evolutionist is led to believe that has survived and gained the most general acceptance by intelligent beings which was most fit so to do. Thus the doctrine of "universal law" governing the universe has gradually developed from direct observation of nature.

The doctrine of atoms and molecules pervades the philosophy of all, or nearly all, of whom we have spoken, and whether a form of Pantheism or a detached creator is assumed, the system is equally dependent upon it. No theory of the "material universe is capable of scientific conception without it." It was advocated with more or less modification by Bacon, Descartes, Hobbs, Locke, Newton, Boyle and their successors. Dalton, and in our own day, Loschmidt, Storey and Thompson, have attempted to determine their size. Recent discussions of Williamson and Maxwell, in England, show the hold it has upon the scientific mind to-day. Thus, through a

long succession of ages, has the intellect been engaged in working its own advancement from the unknown and unknowable to the known and knowable, from mysticism and superstition to scientific charms and accuracy.

The doctrine of evolution is the embodiment of modern science and philosophy. It is, as we have said, the outgrowth of combined intellectual efforts of man from the earliest period of activity till now, and, as at present formulated, represents these combined experiences, modified by the individual opinion of its advocates. It deals with substantially the same problem as the ancients contended with, but in a different way and with more experience. Modern philosophical principles under this influence are as follows :

1. "That law prevails throughout all nature, and has prevailed through all time"

2. "Reason is the ultimate arbiter in all philosophical questions—that no conclusions must be adopted without a careful examination of all sides and an impartial consideration of all facts and theories."

3. "A knowledge of scientific and philosophical truth is beneficial to the people."*

By virtue of the mutual dependence of science and philosophy, and as an outgrowth from these ideas the scientific doctrine of evolution or Darwinism has sprung.

The operation of universal, everlasting, unchangeable law has wrought a process of development which this doctrine professes satisfactorily to reason to explain. Primarily its application is only to the explanation of organic change; but in its broadest sense it is the "universal theory of development which embraces the whole domain of human knowledge." And here let us draw a distinction between science and philosophy—Science is a knowledge of laws, principles and relations—it is classified knowledge. Philosophy is the system by which such knowledge is attained—a science of first causes.

It was a feature of Bacon's philosophical system to collect all known facts in regard to natural phenomena, and on this basis form a theory; the result would be as perfect a scientific theory as could be produced by the human mind. Upon such a system of induction as promulgated by Aristotle and Bacon the science of to-day relies for the maintenance of its position. By it everything relating to the individual, society, religion, politics, history, science, philosophy and every class of human

* Hittell's "History of Culture."

knowledge, it is claimed, is more satisfactorily explained to a reasonable being than in any other way. Evolution, Darwinism, Development, Descent may be considered as interchangeable terms, and to represent the sum total of modern scientific facts. Evolution, the term in general use, may be defined as "that hypothesis which affirms that all organisms, viz: all species of animals or plants which have ever existed or which still exist on the earth, are derived from one single or a few simple forms, and that they have developed themselves from these in the natural course of a gradual change."* Such development being influenced by heredity and adaptation, and that form survives to perpetuate itself which was most fit so to do. It aims at answering a number of questions regarding the genesis or beginning of things. It attempts "an explanation of the problem of change, of the incessant process of transformation which the world manifests. The common form of this question is "what is motion, and how does it arise?" It inquires into the intelligent order in the world, to the existence of general classes of things, including minds; of universal law, and finally to that appearance of a rational end toward which all things tend. It accounts for the origin of organic beings which appear to be subordinated to different principles from those which control those inorganic. Lastly, it attempts a solution of the mystery of conscious minds in dependence on physical bodies, and, as a subordinate question, may be mentioned the meaning of human history and its dependence on physical processes."† The doctrine of evolution of the cosmos is opposed to the doctrine of direct creation and emanation. It substitutes a natural and necessary process for that of an arbitrary volitional one. Between the life of the individual, as traced by this theory of development, and the mental progress of the race, there is a certain analogous relation; to use a well-worn metaphor, it is the analogy of the metamorphism of the caterpillar into the butterfly. History shows that the human mind, fed by constant accession of knowledge, periodically grows too large for its theoretical covering, and bursts it asunder, to appear again in new habiliments, as the feeding and growing grub casts its too narrow skin and assumes another, but temporary. "This imago state of man," says Huxley, "seems to be terribly distant, but every moult is a step gained, and there seems to have been many."

By virtue of this apparent analogy the facts of biology, as deter-

* Hackel's "History of Creation"—Vol. I.

† Huxley in "Encyc. Brit."

mined by embryology and comparative anatomy, have served the means by which the fundamental laws of race progress are formulated. A history of the individual existence is a condensed history of the race. Recent researches in these sciences have revealed certain facts beyond dispute, facts which anyone may observe for himself, tending to show a structural unity of the higher and lower forms of organisms, thereby supporting the hypothesis of a few simple forms at the beginning. A few of these it is necessary for us to notice.

Each human individual is developed from an egg—a simple cell. In the development of this egg an organism is first produced entirely different from the human body, but not at all different from other animals. At certain stages of its development it has “the characteristic of a lancelet, later of a fish, and at subsequent stages of amphibious and mammal forms, and in the further evolution of mammal forms those first appear which stand lowest in the series, viz: forms allied to beaked animals (ornitholyntus)), then those allied to pouched animals (marsupials); these are followed by forms resembling apes, and lastly, the peculiar human form is produced.”* The series of forms through which the individual organism passes during its progress from the egg cell to its full developed state is a “brief compressed reproduction of the long series of forms through which the animal ancestors of that organism (or the ancestral form of its species) have passed from the earliest period of so-called organic creation down to the present time, and the causal nature of the two is dependent upon heredity and adaptation.”†

It appears from this that the form next preceding the human, which the ovum assumes in its development, is that of an ape. It becomes necessary to give our attention to this organism, and, as the ancestral form of our species has passed through similar transformation, according to this hypothesis, we should consider the catarrhine, or man-like apes, with due respect. Most men are shocked at such consideration, and turn with scorn from any philosophy which traces his genealogy in the line of apes. It awakens a sudden and profound mistrust, says Huxley, “of time-honored theories and strongly-rooted prejudices regarding his own position in nature and his relation to the under world of life.”

To those who stop to think, the struggle for existence of scientific and philosophical truth would dispel this illusion of prejudiced minds.

* Hackel's “Evolution of Man.”

† Ibid.

They would remember the tortures of the Spanish inquisition, the heresies and heterodoxy which succeeding generations have been able to appreciate, and, in the light of advancing knowledge, have pronounced truth; their persecutors appearing in history as fools wedded to orthodoxy and superstition to the exclusion of truth. For this reason, if no other, our respectful attention is due the man-like ape. All investigators agree that there are certain anatomical similarities of structure. The general plan is the same, modified by heredity and adaptation. The ape nearest resembling man is either chimpanzee or the gorilla.

Without going into detail, it may be accepted as a fact that a certain unity of anatomical structure does exist. Mindful of what has been said regarding the development of the human from the ovum and this unity of structure after maturity, let us return for a moment to the comparative embryological development of the two.

Every being created comes into existence in a different form from that which it finally assumes, and more simple in structure. The oak is quite a different thing from the acorn; the butterfly from the caterpillar; man from the microscopic ovum. Throughout the course of individual development it is satisfactorily proven by such observers as Bishoff, Von Bär and Remak, that a certain similarity in the advancement from the embryo state exists, and that at certain periods in the development of animals near related the development is identical, and at this time it would be impossible to distinguish the one from the other. Later, there seems to be a divergence in the process. The closer the two animals resemble in the adult state, the longer this longer this similarity in development lasts. An 'opossum and a kangaroo resemble one another very nearly through the whole process of gestation; likewise man and the catarrhine apes. The human ovum is about 1.125 of an inch in diameter. It does not differ from that of other animals in structure, and is not distinguishable from a young puppy until far advanced in development, and when points of difference do appear, "exactly where man differs from the dog he resembles the ape, which, like man, has a spheroidal yolk sac and a discoidal, sometimes partially lobed plasenta, so that it is quite in the later stages of development that the young human presents a marked difference from the young ape, while the ape departs as much from the puppy as man does."*

* Huxley's "Place in Nature."

some this alone is sufficient to establish the structural unity of man with the rest of the animal world, and more particularly and closely with the apes. Again, says Huxley, "identical in the physical process in which he originates, identical in the mode of nutrition before and after his birth with the animals which lie immediately below him the scale, in his adult and perfect structure, possesses a marvelous likeness of organization. He resembles them as they resemble one another. He differs from them as they differ from one another, and though these differences cannot be weighed and measured, their value may be readily estimated. The scale or standard of judgment touching that value being afforded and expressed by the system of classification of animals now current among zoologists." Another class of physical evidence, upon which special stress is laid by Haeckel, and upon which modern science relies, in a measure, for its ideas in regard to man's position in nature, is offered by the rudimentary organs. In some animals certain organs are found in an imperfectly developed condition, and in such imperfect conditions subserve the individual to no purpose, but in animals lower in the scale, where the development is more perfect, are very important. Following the laws of heredity and adaptation, a change of environment of succeeding generations rendered these organs useless, so that the descendants of an individual under such circumstances are imperfectly developed in this particular. A number of such instances in man are found. The small fold of membrane at the inner canthus of the eye, from its position and relations to other parts, is believed to be a rudimentary nictitating membrane, which in some of the lower animals, as the fishes, is perfectly developed. As the progressive development proceeded it became useless, and appears smaller and smaller, until it is barely noticeable.

Very few men have the power of moving their ears, yet an apparatus for such motion is possessed by every man. The same muscles which enable the lower animals to have free control over the ear are in man. The environment of man is such that it would be useless for him to move his ears. So from disuse, through successive generations, these muscles are imperfectly developed. Rabbits, under domestication, have been made to suffer a similar affliction and to lose entirely the power of pricking up their ears.

Thus the modern scientist claims to have determined man's place in nature, and the conclusion is based on physical facts that he is

descended from the ape, and is only a degree higher in the process of development, through which all things are still passing, and which has been in operation through all time ; that he is descended from the ape follows as a "special deduction from the general induction law of the descent theory, according to the stern commands of inexorable logic."*

Thus the evolutionist traces the development of the individual, and by virtue of the analogy between the life of the individual and that of the human race, it attempts an extension of the doctrine to establish general laws of development which embrace every organic object, regarding the higher forms as gradually arising out of the lower. The totality of existence by an orderly succession of events, or a process of becoming, is under the influence of the same laws as individual existence.

The evolutionist explains how things have become what they are, and this transformation is still going on. The physical world is a gradual progress from the simple to the complex, from the indeterminate to the determinate, from the uniform to the varied. The doctrine of evolution is almost identical with progress, although this term is applied usually to processes in the moral, as distinguished from the physical world. It is the doctrine of progress from worse to better. As Herbert Spencer remarks, "It points to an increased value in existence, as judged by our feelings, at the same time, inasmuch as conscious, and particularly human life, is looked on as the highest phase of development, and man's development is said to be an increase in well-being and happiness, we do not greatly err when we speak of evolution as a transition from the lower to the higher, from the worse to the better." It is progress in the wider sense of cosmic development, "inasmuch as all advance implies a larger measure of adaptation and is of permanence."

Like all else depending upon the interpretation of the human understanding, the significance of the evolution idea is capable of several interpretations, dependent upon the answers to three questions, viz :

1. "How far is the process a real objective one?"
2. "What is the nature of that reality, which makes the content, so to speak, of the process?" and
3. "How is the process brought about?"†

* Haeckel's "History of Creation."

† Encyc. Brit. Art Evoluton.

So there arises several sects of evolutionists according to the peculiar philosophical views as to the force or activity which brings about the process of change. Some will ascribe it to physical events, as conditioned by antecedent or efficient causes. This gives the mechanical view. Another will discard antecedent causes as a factor of the process of changes, and consider it as related to, and determined by, some end or purpose. The one leads to the materialistic, the other to the spiritualistic view of nature. Another still will combine the teleological and mechanical, and give us a view of evolution, based on the monastic idea that the material and mental are two equally real aspects of one and the same thing.

Under the influence of those entertaining the last view the doctrine has had considerable effect upon psychology, and nearly all recent works on that subject attempt more, more or less, to formulate a mental evolution by which human intelligence is brought into relation with that of the lower animals.

Upon anthropology it has had still more effect; nearly all the recent writers and historians of culture accept its deductions. Mr. Walter Bagehot, in his work, "Physics and Politics," attempts, by natural selection, to explain certain aspects of political progress. It is still more interesting to notice the effect it is having on our ethical and religious ideas.

Fanaticism in evolutionary ideas leads to blind atheism, just as fanaticism in other branches of philosophy obscures the tenets of the whole system. Evolution is not atheism, as Dr. Hodge says. Darwin himself considers it not only compatible with an original creation, but to supply "a higher conception of divine attributes than the doctrine of special creation." Mr. Barratt, in his work on "Physical Ethics," is able to connect the moral evolution of man with the whole process of organic and cosmic evolution. The doctrine, as formulated by Spencer, excludes the idea of an original Creator, and of course is violently opposed by theological waters. It appears, says Mr. Spencer, that "the doctrine is serving as the starting point of a new quasi-religious conception of nature;" and in his own works it is ever the "unknowable force which sustains the everlasting worlds."

Thus have we given the general outline of the evolutionist solution of the problem of human existence. Many facts serving to establish this hypothesis are necessarily omitted. A general idea of

the origin, mission and destiny of man may be deduced from what has been said. The question then arises, what have we as physicians to do with it? What relation has it to our profession?

In our professional relations we are brought in contact with all classes and condition of people, the high and the low, the learned and the ignorant, religious persons and the infidels, the rich and the poor, the fool and the knave, and in such position much can be done to the furtherance of truth and accuracy of ideas.

It is not our duty to stifle the investigation of nature's laws by throwing around us the cloak of religious fanaticism, veiling truth with superstition and orthodoxy, unless, after a careful analysis of fact, reason dictates such a course. The foundation of modern science is facts; the special deductions from these facts we must accept just so far as reason dictates. Appealing, as it does, to reason alone, modern science is not to be uprooted by figures of rhetoric or flights of oratory, which for the time tickle the fancy, but by such an array of facts against it as to produce a preponderance of evidence. Reason is then to be the "criterion of truth" in coming to a conclusion in regard to modern science doctrines, and that course will be right which is most in accord therewith, be that teleological or materialistic. As scientific men, we must attempt to determine truth without prejudice, and having determined it to our own satisfaction, disregard what others may say unless additional facts prove our conclusions erroneous. The motive is not to break down established opinions nor the destruction of religious creeds. He who fully appreciates the true nobility, the grandness of that principle within him, which creates the desire "to look through nature to nature's God," is animated by other than the desire to destroy the religion of the land. The motive of the true scientist "is the extension of men on all sides into nature till his hands should touch the stars, his eyes see through the earth, his ears understand the language of beast and bird and the sense of the wind, and through his sympathy heaven and earth should talk with him."*

* Emerson's "Conduct of Life."

REVIEWS AND BOOK NOTICES.

OPERA MINORA : A COLLECTION OF ESSAYS, LECTURES AND ADDRESSES FROM 1866 TO 1882 INCLUSIVE. By EDWARD C. SEGUIN, M.D., Clinical Professor of Diseases of the Mind and Nervous System in the College of Physicians and Surgeons, New York, etc. New York. G. P. Putnam's & Sons. 1884. Pp. 687. 4to muslin.

The medical profession of to-day owes most of its usefulness to the charm which Sir Thomas Watson, Dr. Charles West, Dr. J. Hughes Bennett, Prof. Trousseau, Sir Benjamin Brodie have succeeded in investing clinical studies. Dr. Seguin's book, the title of which we give above, is chiefly a collection of papers founded upon clinical studies, and is a model of the best clinical work in this country, deserving to be ranked with the medical classics mentioned above.

The subjects treated are as varied as they are numerous, as the following partial list will show : "The Use of the Thermometer in Clinical Medicine ;" "On the Subcutaneous Use of the Sulphate of Quinine in Cases of Malarial Neuralgia ;" "On Treatment of Malarial Fevers by Subcutaneous Use of Sulphate of Quinine ;" "The Hypodermic Injection of Quinine ;" "A Statement of the Aphasia Question ;" "Autopsy of a Case of Mania ;" "Contributions to the Pathological Anatomy of the Nervous System ;" "Lecture upon the General Therapeutics of the Nervous System ;" "An Outline of the Physiology of the Nervous System ;" "On Hysterical Symptoms in Organic Nervous Affections ;" "Syphilitic and Simple Pachymeningitis ;" "The Abuse and Use of Bromides ;" "A Clinical Lecture on Syphilitic Cerebral Lesions ;" "Lecture on the Localization of Spinal and Cerebral Diseases" (covering 65 pages) ; "The Diagnosis of Progressive Locomotor Ataxia." Besides these enumerated there are more than fifty subjects treated, a little more than half of which are on neurological, and the remainder therapeutical topics.

We shall not attempt to enter into a review of this volume, but merely to ask our readers to examine it, and see if we are mistaken in saying that it is very superior to any volume yet offered to the profession upon the diseases of the nervous system. It is true it

makes no pretensions to being a systematic treatise, yet the range of its subjects is about as varied as any of them, having the double advantage of being especially adapted to the working practitioner, and as being the outcome of clinical observations by a clinician of superior training in all the science and art of general practice.

The studies in therapeutics are examples of true clinical methods. The two essays on the "Potassium Iodide in Non-Syphilitic Diseases" and "Efficient Dosage in Nervous Diseases," may be taken to illustrate. The publication of the first of these papers in 1883 brought the subject fairly before the medical public, but its teachings were well known to the medical friends and pupils of the author. The writer of this is especially grateful for the advantages which he has derived from the suggestions this line of therapeutical enquiry has giving him in instituting treatment in cases of intractable headaches of non-specific origin.

Although our author is not considered "a Sampson in therapeutics," as a rival therapist has recently expressed it, he is a safe teacher, and will probably wield as wide an influence on general practice as some of the Sampsons.

This book is beautifully printed on heavy paper, but follows a fashion which we are glad to see is fast dying out in America—that of uncut leaves.

VACCINATION: ITS NECESSITY, CONTROL, EFFICIENCY AND SAFETY.

Prepared by EUGENE FOSTER, M.D., Chairman of the Committee of the American Public Health Association on Compulsory Vaccination. Concord, N. H. 1884. Pp.

This is a bound reprint from the "Transactions of the American Public Health Association," setting forth in a very clear light the argument upon which may be based a compulsory vaccination law in the United States. Efficiency and safety of vaccination must be proven to the satisfaction of the people before an efficient compulsory law can be enacted, and this Dr. Foster has done effectually. It might be objected that too much pains is taken to refute the arguments of the English anti-vaccinists, but it must be remembered that it is just such printed matter as that sent forth by these men which reaches the people. These tracts are startling, and written in popular language, while the highly respectable pamphlets of the friends of vaccination are stored away in our medical libra-

ries. This essay is too lengthy to serve for popular distribution, but deserves to have a wide circulation and the subject matter popularized in the form of a tract after the style and fashion of Mr. Ernest Hart's "Plain Facts about Vaccination." To Dr. Foster is due the entire credit of the paper, and it will not fail to add to his reputation as a writer.

PRACTICAL MANUAL OF OBSTETRICS. By Dr. E. VERRIER, Lecturer on Obstetrics in the Faculty of Medicine of Paris. Fourth Edition. Enlarged and Revised ; 105 Illustrations. First American Edition, with Revision and Annotations by EDWARD L. PART-
RIDGE, M.D., Professor Obstetrics New York Past Graduate School. New York. William Woods, 56 & 58 La Fayette Place. 1884. Pp. 395.

The classical work of Cazeaux was for years the prominent obstetric text-book of American students ; but of late years, since the fashion has prevailed of going to Germany for our obstetrics, France has been ignored.

A perusal of this volume shows, if we may judge by this example, that the French teachers have lost nothing of their clearness and logical arrangement of subjects. With such rivals in the field as Lusk, Leischmann and Playfair, we believe that this volume will not fail to maintain an honorable position as a valuable manual of Obstetrics. The illustrations are poor, but the descriptive text leaves little to be desired.

REMINISCENCES AND MEMOIRS OF NORTH CAROLINA AND EMINENT NORTH CAROLINIANS. By JOHN H. WHEELER. Pp. xxxvii—104. 4to.

We have noticed previous instalments of this work, notwithstanding that it is not exactly in our line, but simply because it is about our State.

A sketch of the Colonial Period is written by Daniel R. Goodloe, and is largely apologetic, and devoted to a refutation of assertions made by scribblers in the monthly magazines. Who is not tired of this chronic tone of our historians ! Let us have history divested of all this unnecessary interjection of apologies. We may be willing to let true history speak for us.

The arrangement of this volume is very inconvenient. Although

taken up alphabetically by counties, we often have to look in other places than the appropriate heading for mention of individuals of a certain county. For instance, under the heading "New Hanover County," Cornelius Harnett is merely mentioned (page 299), and a reference on that page directs us to page 63, where we find not a word about him. But the real reference to Harnett should be page 46, and this under the head of Brunswick.

A reference to Hardy B. Croom, the distinguished botanist of North Carolina, in whose honor a very rare genus of plants is named, and who wrote a local flora of Newberne, and who made extensive botanical explorations in Florida, is noted in this sketch merely for having raised a novel question of law by his sad death. Mr. Meehan* says of him: "He was one of the most enthusiastic botanists during the second quarter of our present century. He was a contributor of numerous articles to *Silliman's Journal* during 1832, 1834 and 1835, which made us acquainted for the first time with many valuable facts concerning Southern plants. He studied the curious pitcher plants, or *Sarracenias*, particularly, and his monograph of them is regarded as one of the most valuable legacies to science. He was born in Lenoir county in 1799. He was educated for the law, but gave up all for the study of natural history.

Notwithstanding the many defects of arrangements, and omissions, and numerous typographical errors, the reader will find this to be a valuable collection of historical matter which the student and general reader cannot afford to be without. It is printed in four sections, in large quarto form, at \$1 a section. Address Joseph Shillington, 4½ S. Pa. Avenue, Washington, D. C.

ZUR IMPFFRAGE. RESULTATE DER VACCINATION UND REVACCINATION VOM BEGINN DER IMPFUNG BIS HEUTE. NACH DEN QUELLEN BEARBEITET. VON GEH. MEDIZ. RATH. DR. A. WERNHER, Weiland Professor in Giessen Mainz: Verlay von Victor von Zabera, 1883. Pp. 312.

THE VACCINATION QUESTION—RESULTS OF VACCINATION AND REVACCINATION FROM THE INTRODUCTION OF THE PRACTICE TO THE PRESENT TIME.

Dr. Wernher has for many years been Professor of Surgery in Giessen. Hewas a great worker, and at the age of seventy-six,

* Flowers and Ferns of the United States—Vol. I., Series 11, p. 128.

when he died, he had this volume in preparation. His object was to give to the non-medical public a basis for a well-grounded argument to be used in the defense of the practice in the German Parliament. The printed leaves of the volumes were left in the hands of Dr. W. Hess, in case the author should not survive.

The introduction ably sets forth the mortality from small-pox before and after the introduction of vaccination; and although to those physicians who are familiar with the unanswerable argument the recital of the minute details of this statistical history may appear a vain repetition, yet this part of the volume cannot be too highly praised. Here will be found material for future use by Boards of Health, and from vaccination committees for time to come.

Dr. Wernher places the date of the growing susceptibility of the German population to small-pox as beginning in 1820 and increasing steadily from that date. It was during this period that the appearance of varioloid added so greatly to the confusion of the profession, introducing an element of uncertainty, and driving the French Comité Central to the rash position of denying *in toto* the possibility of small-pox, in any degree, after vaccination. Few students appreciate how seriously this complex question retarded vaccination in Europe, and how great a blessing revaccination proved itself—a discovery only second in importance to the original introduction of vaccination. This argument is historically detailed in the chapter covering the first decennium of vaccination, and under this head the reader will find a good list of the fundamental volumes which appeared during that period. The transcription of English titles, by the way, affords the most amusing exhibition of original spelling, showing that English was probably not a favorite language of the author.

The recital of the possibility of varioloid after vaccination, naturally brings the author (page 108 *et supra*) to consider the interrogatories :

“Is the effect of vaccination temporary?”

“Has the virus degenerated?”

These questions he answers by citing statistical tables of the earlier vaccinations, showing how complete an exemption it afforded, compared with the twenty years succeeding.

Of course, no German work on vaccination would be complete

if it did not contain the account of vaccination in the Prussian Army and civil service. This part of the work is carefully done, and includes not only statistical material, but an account of the results of the practice in what he calls "the new vaccination period."

The question of transmission of syphilis through the medium of vaccine virus is discussed from its various standpoints, and the argument presented is one of the most popular.

"The adversaries of vaccination do not fail to represent the transmission of syphilis as exceedingly frequent, and to tell the public that every vaccinated person is in danger of contagion. It is their most effective weapon for frightening timid people. But the number of cases on which this fear is supposed to be based is exceedingly small compared to the regular vaccinations. * * * Since the first publication of transmission of syphilis, seventy years ago, not forty cases in all Europe have become known which have a right to be considered; not one during a space of a twelvemonth with millions of regular vaccinations. Also a good proportion of these older cases are not reliable, and came down to us from a time in which the conditions were not known which we stipulate as necessary for a reliable observation. Many, on being examined officially, have proved themselves as gross misconceptions, or even intentional misrepresentations. The pretence, therefore, that syphilis by vaccination is of horribly frequent occurrence, proves to be one of the flagrant falsehoods which are spread by men without conscience to fill the minds of the anxious public with hatred against vaccination."

To all students of vaccination questions, and especially medical men charged with the administration of public health regulations, we commend this volume.

SEXUAL NEURASTHEMIA. THE HYGIENE, CAUSES, SYMPTOMS AND TREATMENT, WITH A CHAPTER ON DIET FOR THE NERVOUS. By GEORGE M. BEARD, A.M., M.D. E. B. Treat. New York. 1884.

This work is from the posthumous manuscript of Dr. Beard, edited by A. D. Rockwell, A.M., M.D.. It is a small octavo of 270 pages, attractive in its appearance, but is really a very much over-padded volume, upon a subject very difficult to treat. We doubt if the author would have been indiscreet enough to have diminished

his reputation by the presentation of this subject in such a shape had he lived to send his manuscript to press.

We would not wish to be understood that the work is without some merit, but it is rather of that kind which is intended for the non-professional reader.

CORRESPONDENCE.

RICHMOND, IND. June 18, 1884.

Editor N. C. Medical Journal:—Will you kindly allow me space for an elucidation of the intent of my resolution adopted by the American Medical Association in Washington, and alluded to by you editorially on page 247 of your May issue?

In submitting that resolution it was assumed that there was a widespread and growing sentiment among the people of the several States that practitioners of medicine should be educated persons—not that this education must necessarily be pointed with the peculiar tenets of the regular physician, or any other special school of practitioners, but simply that those who undertake to heal the ailing should have their minds enlightened and enlarged by cultivation in general, and especially with knowledge of the rise and progress of the healing art and the structure and functions of the human body, and with the signs, symptoms and nature of disease, and that the existence of this cultivation should be ascertained by provision of law.

That the legal qualifications to practice medicine should be essentially the same in the several States is regarded as a proposition too obvious to need argument for its acceptance, but recognizing the autonomy of the States in the regulation of this business, there was a feeling that if some dominant authority would formulate and recommend a standard of educational qualifications in this behalf all the States might consistently adopt the same and incorporate it into any law they might enact in this direction, still exercising their special and respective views in all the details of erecting and maintaining such standard.

It is an admitted fact that in some of the States, at least, no legal

standard of medical education can be established and maintained that does not leave the educated free to practice any system of medicine he may elect, and therefore in any scheme prepared for universal adoption, while demanding thorough cultivation in all the elementary branches of medical science, it must leave untouched so much of a finished medical education as is included in the application of established principles to the relief of the ailing according to the tenets of regular medicine or any other class of practitioners.

The American Medical Association is the only medical organization in the United States that exercises jurisdiction over the entire country, and it, therefore, is the only body that could consistently formulate and recommend a standard for these examinations, and accordingly it was appealed to through its section on State medicine to recommend that all who aspire to become practitioners of medicine should pass a satisfactory examination in medical history, anatomy, histology, physiology, chemistry, pathology, pathological anatomy, ætiology, semeiology, mechanical surgery, mechanism of parturition, hygiene and medical jurisprudence. This scheme met with determined opposition in the section chiefly on the ground that its presentation in the Association would excite a storm of opposition that would retard, rather than advance, the purpose it was intended to serve, and it passed the section by a close vote, but when brought before the Association in general session it was adopted without a dissenting voice.

In order that those interested might have notice of the intention to submit this proposition a communication from me was published in the *Journal of the American Medical Association* April 5th, 1884, advocating the propriety and estimating the value of such a proceeding; and now that the Association has acted thus, is substantial ground to believe, that if those engaged in securing legal enactments to inquire into the qualifications of the new accessions to the ranks of medical practitioners will catch the spirit of this recommendation and crystalize it into a law, it will constitute a grand and successful step toward laying the foundation for measures that will secure a future class of practitioners that shall have the merit of a full and enlightened professional education—one that will prove of incalculable benefit to those whose necessities demand intelligent medical attention, and will be the first practical advance toward rooting out all manner of irregular practice through the virtue of scientific culture. JAS. F. HIBBERD.

[This letter, from our esteemed friend, Dr. Hibberd, was unavoidably crowded out of our last number.—ED.]

CURRENT LITERATURE.

GASTROSTOMY, ŒSOPHAGOSTOMY, INTERNAL ŒSOPHAGOTOMY, COMBINED ŒSOPHAGOTOMY, ŒSOPHAGECTOMY, AND RETROGRADE DIVULSION IN THE TREATMENT OF STRICTURE OF THE ŒSOPHAGUS.

The frequency of carcinomatous obstruction of the œsophagus in middle life, and of cicatricial, or fibrous stricture, particularly in subjects of tender years, has led Dr. Samuel W. Gross to collect in the July number of *The American Journal of the Medical Sciences* the somewhat numerous and scattered instances of the various operations which have been practised for their relief, and elaborately study and compare their relative value and disadvantages. To fulfil this object intelligently he has considered separately carcinomatous and simple strictures.

The four operations applicable to *carcinomatous stricture* are gastrostomy, œsophagostomy, internal œsophagotomy, and œsophagectomy, of which the first three are palliative and the last curative.

From the consideration of one hundred and ninety-four cases of operative procedure, Dr. Gross finds that gastrostomy has proved to be the simplest, most rational and safest of the four operations for the relief of carcinomatous stricture. Increasing experience demonstrates that the results are growing better and better, which cannot be said of œsophagostomy; and there is every reason to believe that the successes will become more numerous if it is resorted to as soon as the diagnosis of the disease has been made, and before the powers of the patient are materially impaired. The few deaths do not constitute an argument against its adoption; while "every recovery is a clear gain; and a fatal issue is simply the natural termination forestalled."

The operations which have been practised for *cicatricial stricture* are gastrostomy, œsophagostomy, internal œsophagotomy, combined œsophagotomy and retrograde divulsion. Dilatation Dr. Gross holds is merely a palliative remedy, and sufficient time has not yet elapsed to test the value of divulsion through an opening in the stomach. Combined œsophagotomy for strictures near the cardia is only applicable to children, and may prove of value in strictures impas-

sible by instruments introduced through the mouth. Internal œsophagotomy, if performed at all, should be reserved for comparatively recent and short strictures, and œsophagostomy is only applicable when the incision can be made below the obstruction. Gastrotomy he holds is the best and safest operation for simple stricture of the œsophagus.

From the great difficulty of managing *cicatricial stricture in children* by dilatation, which is due partly to the struggles of the subjects and partly to the disinclination of the parents to distress the child, Dr. Gross holds that dilatation should be resorted to only when the inflammation has subsided and the denuded surface is in a granulating condition. When the constriction is of some standing, and efforts at dilatation prove fruitless, gastrotomy will prove to be the safest and most beneficial operation for prolonging life.

Dr. Gross gives elaborate statistics, based on two hundred and seventy-one cases, in regard to operative interference for obstruction of the œsophagus.



ON OPENING AND DRAINAGE OF ABSCESS CAVITIES IN THE BRAIN.

The antiseptic method of operating and after-treatment has not as yet been fully tested in operations upon the brain. This is natural, for not only have we inherited a just dread of dealing with an organ, the large majority of whose diseases are dangerous or fatal, but our knowledge of the physiological functions of the brain and of their pathological modifications being extremely limited, we are not in a position to form such an accurate diagnosis as calls for surgical interference. Drs. Christian Finger and E. W. Lee, of Chicago, in an extremely interesting paper on this subject in the July number of *The American Journal of the Medical Sciences*, consider the treatment of traumatic cerebral abscess, and report a case which was successfully treated by opening and drainage.

Bergman, in discussing the treatment of cerebral abscess, unhesitatingly sets it down as an axiom that wherever there is an accumulation of pus, trephining is most clearly and indubitably indicated, for the opening of an abscess in the brain is as necessary as in any

other part of the body, and we would add even more so. A correct diagnosis of the abscess having been made, the further difficulty presents itself of locating it with sufficient accuracy, so as to be able to find it. A number of cases are on record, in which a correct diagnosis had been made, the trephine also put on more or less at the right place, but the knife or trocar being passed into the brain, nevertheless missed the abscess. Drs. Finger and Lee show by their case that this difficulty can be obviated by multiple exploratory aspirations, performed at interstices sufficiently small to prevent any abscess from escaping detection, even if the trephine opening should not have been made at the point of the skull nearest the abscess.

There are on record a large number of cases of cerebral abscess, in which trephining was performed, pus evacuated, and temporary relief obtained; but later relapse followed, and a fatal termination ensued. It is possible, judging from the success the practice has met with in the treatment of abscesses in other situations, that drainage of the cerebral abscess-cavity, with or without washing out, would have saved some of these cases by preventing the reaccumulation of pus and the continuous infection of the surrounding brain tissue, the acute œdema of which is well known to be, as a rule, the final cause of death. As far as Drs. Finger and Lee are aware, draining and washing out of cerebral abscess-cavities has heretofore not been tried; that it can be effected and without any detriment to the patient, is shown by their case, the treatment of which they hold strictly conforms to the rational methods of modern surgery in treating abscesses in general; and because of this, and not because their patient recovered, they regard the case as answering affirmatively the question: It is probable that abscesses in the brain can be treated advantageously on the same principles as abscesses in other parts of the body?



UNILATERAL SWELLING OF HYSTERICAL HEMIPLEGIA.

Dr. S. Weir Mitchell records in the July number of *The American Journal of Medical Sciences* three cases of hysteria, in which there was unilateral increase in bulk, at or near the menstrual period,

and also at other seasons, after emotional excitement, and he has been unable to find elsewhere any narration of similar cases. Whatever conclusions we may reach as to the immediate cause of the unilateral differences in size, which Dr. Mitchell has here described, it is at least clear that they are under the influence of the nervous system, and vary with the causes which also increase or lessen the analgesia, or give rise to chronic spasm. Beyond this Dr. Mitchell can as yet hardly go. Most probably, he thinks, it will be found that in many unilateral hysteric palsies a like phenomenon exists, and has merely escaped attention because of being the least prominent in a group of symptoms. At all events, it adds another to the large group of resemblances which so closely relate organic to hysteric hemipalsy.

BRIGHT'S DISEASE OF MALARIAL ORIGIN.

Dr. I. E. Atkinson, of the University of Maryland, believing that this subject has not attracted the attention it deserves, has been led to study with reference to it all cases of malarial fever coming under his observation during the late summer and early fall of the past two years, at Bayview Asylum, and the result he gives in an able and elaborate paper which appears in the July number of *The American Journal of the Medical Sciences*. The conclusions which he reaches are as follows :

1. Transitory albuminuria is not uncommon in the course of malarial fevers, and is due to the intense visceral congestions characteristic of these affections. It only may endure throughout the height of the congestion, recurring with each return of this, or it may persist in the intervals, in which event a higher grade of congestion is attained, more nearly approaching a condition of acute inflammation.

2. In a proportion of cases, varying with locality and type of prevailing epidemic, or individual conditions, inflammation of the kidney occurs, accompanied by dropsy and the usual symptoms of nephritis.

3. The usual form of malarial nephritis is the tubal and diffuse variety. In this the inflammation seems to be most intense in the vicinity of the glomeruli.

4. Contracted kidney may occur as an advanced stage of malarial nephritis either from long-continued or frequently repeated attacks of malarial fever, or from fibrotic changes such as may ultimately occur in ordinary tubal or diffuse nephritis. It is altogether improbable that this form of malarial renal disease ever occurs primarily as purely interstitial nephritis.

5. These changes may be induced by any form of malarial fever, though they more commonly follow chronic intermittent fever.

6. The tendency of malarial inflammation of the kidney is toward recovery. But from the persistence of the impaludism or the intensity of the inflammation, structural changes may be produced that are characteristic of chronic Bright's disease, when the gravity of the affection will be as that from chronic Bright's disease from whatever cause.

7. Treatment should be directed primarily against the malarial intoxication, more especially in recent cases. A correction of this will often be followed by a complete, though often gradual, subsidence of the nephritis. Even in more chronic cases the malarial factor in the process should definitely be destroyed if possible, after which the disease should be treated as ordinary Bright's disease.

THEORIES OF COLOUR-PERCEPTION.

Dr. Swan M. Burnett, of Washington, D. C., elaborately discusses in the July number of *The American Journal of the Medical Sciences* the various theories of color-perception, and points out that none of them accounts in a consistent manner for all the phenomena of normal and abnormal colored-vision, and that, moreover, there are certain objections on physical grounds which, with our present knowledge of the laws of molecular and wave-motion, are insurmountable. He advances a theory which he thinks meets the requirements of the case in the light of recently acquired knowledge. He holds that it is essential to do away with the idea of the retina as a differentiating organ, and that it should be looked upon simply as receiving and transmitting structure which shall give up faithfully to the optic nerve the impressions made upon it by the waves of the

luminiferous ether. These impressions are carried by the nerve to the brain and are there properly differentiated and converted into sensations. He believes that by this means all the phenomena of color-perception and color-blindness can be explained in a natural and consistent manner, without the necessity of imagining new tissues or novel or unusual reactions of these tissues to light. Dr. Burnett considers the retina to be a substance whose ultimate structure is such as to allow it to respond at one and at the same time to a large number of ethereal vibrations; at least such a number as shall be represented by the clearly distinguishable colors of the spectrum.

His theory, Dr. Burnett holds, explains the phenomena of defects in color-perception, and receives support from biology and embryology.

A SHORT LESSON ON THE SPREAD OF CHOLERA.

Speaking of the importation of cholera in Europe, the *British Medical Journal* says;

“But the most important factor in the whole problem is one to which the nations of Southern and Western Europe persistently shut their eyes. As Petenkofer tersely puts it, there must be the germ and there must be the soil; if a single case of cholera be imported into a place where the ground is reeking with organic matter, the water polluted with excrement, and the air tainted with the effluvia of putrefaction, the germs will find a favorable soil and give rise to a severe epidemic; whereas, if the same occur in a town where the streets and yards are regularly cleansed, the sewerage is good and the water pure, a few cases may follow from immediate contagion, but the plague will fail to establish itself. It is just the difference between burying mushroom spawn in a dunghill or a sandheap; in the one case we shall have a rich crop; in the other a few feeble and shortlived fruits. By all means exclude the first class, if we can; but at any rate let us make sure that, if they evade our vigilance, they shall die out for want of the conditions necessary for their continuation. We may not be able to keep out the enemy; but we can, if we will, starve him out when he has landed in our midst.”

[It would be easier to get the public to believe this than to teach any

considerable number of people a higher standard of sanitary fitness, and keep them up to this standard in practice. Our people stand an immense number of sermons on sanitary matters, and are good critics of pamphlets on such subjects, but nothing short of the actual nearness of a dangerous disease or the strong arm of the law (a thing unknown in this Southern country) can compel communities to be tolerably decent as to sanitation.]

REDUCTION OF TEMPERATURE IN INFANTS.

Dr. Samuel G. Armor, in a discussion on "Ephemeral High Temperature in Infants," before the Medical Society of the County of Kings (*New York Medical Journal*, July 19, 1884), made some practical remarks on the reduction of temperature in infants :

"We might not know why in early and infantile life this disturbance of equilibrium more readily took place than in adult life. And yet we knew the fact that the brain and nerve-centres were peculiarly impressible in early life; hence easily disturbed, giving rise to ephemeral forms of fever, convulsions, etc. We found also that elevation of temperature was much more easily subdued in infantile than in adult life, and by simpler means. He heartily agreed with the author of the paper in condemning the constant resort to large doses of quinine, aconite, digitalis, veratrum, etc., in the treatment of these ephemeral high temperatures. First try the simpler remedies. Without reference to unsettled theoretical questions, we could often make the heat-evolving compensatory to the heat-producing powers by the judicious use of baths. Quite recently he had seen persistent convulsions in a child with a temperature of 105° rapidly relieved by the simple application of an ice-pack to the head and the nape of the neck. The temperature came down rapidly, with a prompt subsidence of the convulsions. While he was in Edinburgh, some years since, Dr. Keith, the eminent ovariologist, had called his attention to the fact that, by cold local packs to the base of the brain and to the neck he could generally reduce the temperature about 2° —all, perhaps, that he required after surgical operations."

[It must be borne in mind that Prof. Armor distinctly says ephemeral high temperature, for it would be a fatal mistake in a malarial region to rely upon ice. Quinine must be promptly used to arrest death.—ED.]

HARTICHOKES.

A friend has left us a flowering specimen of *Cynara Scolimus* (Burr artichoke), with some information as to its employment in old times among the slaves as a remedy in "dropsy," and a suggestion that it is worth investigating. Of course we appreciate the attention and the compliment implied, but preliminary to undertaking such a huge task let us quote from our old friend Nich. Culpeper's "*The English Physitian Enlarged*," 1653: "HARTICHOKES. The Latins cal them Cineria, only our Colledg calls them *Artichocus*. *Government and Vertues*. They are under the dominion of *Venus*, and therefore it is no marvel if they provoke lust much, as indeed they do, being something windy meat, and yet they stay the involuntary course of natural seed in man, which is comonly called Nocturnal Pollutions. And here I care not greatly if I quote a little of *Galens* nonsense in his Treatise of the faculties of Nourishment, he sayeth they contain plenty of Cholerick juyce (which notliwithstanding I can scarcely believe) of which he saith is ingendered Melancholy juyce thin Cholerick blood; but to proceed this is certain, That the Decoction of the Root boyled in Wine, or the root bruised and distilled in Wine in an Alembick, and being drunk purgeth by urin exceedingly."

NUMBNESS OF THE HANDS.

Dr. Downes, LR.C.P., London, considers there is good deal of evidence to show that numbness of the hands is a symptom of gout, probably some gouty infiltration in the sheath of the nerves, or possibly on such nerves as are predisposed by being subject to pressure, such as the ulnar. He says that in any case alkaline treatment, with perhaps iodide of potassium, is the best to adopt.

Dr. Downes refers to that form of numbness which occurs when one is out of sorts, with a furred tongue and highly acid urine, having a numbness quite independent of paralysis. His theory is almost surely correct. A teaspoonful dose of fluid extract *Rhamnus Purshiana* two or three nights in succession, with alkaline water,

will be the therapeutical test of the nature of the numbness. We know of several patients with a gouty tendency who are first aware of lithiasis by sensitiveness of the ulnar nerves, being obliged to avoid any pressure on them.

THE INFLUENCE OF AGE ON THE LABOR OF PRIMIPARÆ.

Kleinwächter has studied this subject very thoroughly, not solely with reference to the length of labor, but with a view to determining the relative liability of primiparæ of various ages to antecedent menstrual disturbances, to the various accidental complications of pregnancy and to puerperal disease. He has also investigated the relative necessity of instrumental interference, relative morbidity and mortality, the liability to abortion, and the influence of the mother's age on the sex and weight of children. The material for study Kleinwächter found in the records of 920 cases of primiparæ in his clinic at Innsbruck. These cases he divided into three groups, namely :

- | | | |
|------|----------------------|------------|
| I. | 16-19 years of age : | 111 cases. |
| II. | 20-29 years of age : | 694 cases. |
| III. | 30-41 years of age : | 115 cases. |

These groups he designated as the young, the middleaged and the old, respectively. From his study of these cases Kleinwächter draws, among others, the following conclusions :

(1.) Accidental complications, which have nothing to do with pregnancy, occur least often in the youngest primiparæ and most frequently in the old.

(2.) Ailments attributable to pregnancy are observed most frequently in the old and next most frequently in the young.

(3.) Hæmorrhages in the course of pregnancy occur most frequently in the young and least frequently in the old.

(4.) The duration of labor is most frequently abnormally protracted in the old: in this respect the young stand next to the old.

(5.) Inefficient pains, on account of which the duration of labor is abnormally protracted, are least often observed in primiparæ in

the bloom of their sexual life, i- e., from 20-29, and most frequently in the old.

(6.) Therefore forceps must be used most frequently in the old and least often in the middle-aged.

(7.) The lengthening of the labor of primiparæ with the increase of age occurs chiefly in the first stage: the second stage is scarcely affected by differences of age: the third stage is not at all affected.

(8.) The mortality per cent. after forceps operations on primiparæ rises parallel with the increase in age.

(9.) The older the primipara, the greater is the danger of perineal laceration.

(10.) The older the primipara, the more likely a post-partum hæmorrhage, although the frequency of hæmorrhage is by no means so great as hitherto supposed.

(11.) With increase of age increases the disposition of primiparæ to affections of the kidneys.

(12.) The frequency of œdema without kidney disease also increases with the age.

(13.) The older the primipara, the less the danger of mastitis, and the less also the likelihood of her ability to suckle.

(14.) The old most frequently, the middle-aged least frequently, sicken and die of puerperal fever: the same is true of puerperal mania.

(15.) The morbidity and mortality per cent. is highest in the old and lowest in those from 20 to 29 years of age.

(16.) Spontaneous premature labor occurs very frequently in old primiparæ, and least often in the middle-aged.

(17.) With increase of age the frequency of abnormal positions of the fœtus increases.

(18.) The older the primipara is, the more likely is she to bear a boy, except only those from 20 to 21 years of age, who bear more girls than boys.

(19.) Analogous to the discovery made by Hecker and confirmed by Wernich, that first-born children are heavier and longer the older the mothers are, is the fact that the umbilical cord of the first-born of old mothers falls off the earliest, and that of the first-born of the youngest mothers the latest.

(20.) The liability to twin pregnancy in primiparæ increases with their age.

(21.) With increase of age in primiparæ the frequency of bearing deformed children diminishes.

(22.) The mortality per cent. of first-born children increases with the mothers' age: among the oldest primiparæ the fœtal mortality reaches a not inconsiderable height.—*Boston Medical and Surgical Journal*.

DISEASES DUE TO INCREASED PRODUCTION AND ELIMINATION OF URATES AND URIC ACID.

By ORVILLE W. OWEN, M.D., Detroit Michigan.

Physicians all acknowledge the important part taken in our animal economy by the urates. Let them be retained in the system but for a day, and the whole eliminative pharmacopœia is at once called into action to bring about their normal excretion. How is it, then, that so little notice is taken of the opposite conditions of two great production and elimination? We may ignore this increase, but it is fruitful of evil to our patient, for this is muscle—waste in its highest activity, and is as much a disease as albuminuria or or glycosuria, and will bring about pathological changes which will entail years of suffering upon its victims. Text-books dismiss the urates with a page. Practitioners are prone to follow this pernicious teaching, and the combined result is not gratifying to our science. Lehmann found while living on a purely animal diet that the excretion of urea amounted to 820 grains, on a mixed diet 501 grains, and on a vegetable diet 237 grains per day. Flint gives 355 to 463 grains urea and from six to nine grains of uric acid as normal. Dalton, 32.5 grammes urea and 0.7 grammes uric acid. Foster does not give amounts of either. Yeo gives 500 grains urea and 8 grains uric acid. All physiological text-books teach that muscular exertion increases production and elimination of urates. Pavy (*Food and Dietetics*, page 26 to 49) denies this and claims the increase is due to ingestion of nitrogenous foods. Hoffman and Ultzmann claim the increase of urates under the following heads: Predominant animal diet, increased febrile action, diabetes, lung and heart disease, impeded diaphragmatic movement, leucæmia and uric acid

diathesis. Witthaus claims that the urates are due to oxidation of albuminoids, and, of course, are due to muscle waste.

When such doctors as these disagree, who can be perfect? That the urates play an important part in fevers is well known. Loomis calls attention to their increase in typhoid (page 34, *Lectures on Fevers*), also in typhus (page 227). Wilson (page 5, *The Continued Fevers*), under head of Simple Continued Fevers, says: "Sp. gravity of the urine is high, 1030-35, with increase of solids, and particularly of urea." The same author (page 85) noticed increase in cerebro-spinal fever, also in typhoid (page 177 and page 276), even claims in typhus that the blood, as well as the urine, is loaded with urates.

Quain (*Dictionary of Medicine*) gives the best advice that I have been able to find. I quote from the article on morbid urine, page 1714: "When the percentage of urea is much above two per cent. it generally indicates that the patient is feverish, has been perspiring profusely, or that the quantity of water he drinks is too small. In such cases, if there is no fever or profuse perspiration, the patient should be advised to drink water freely in order to prevent the possible occurrence of rheumatic or gouty affections." Here we have it in a nut-shell, and I shall try and show the intimate relation between increased elimination of urates and the nerve, muscle, liver and intestinal disorders.

Out of 43 cases where analysis of urine gave me increased urates, I find cholesterine in eleven; calcium oxalates in fifteen; spermatozoa in two; bile in eleven (same specimens that have the calcium oxalate, though not appearing in four where oxalates were present). In two cases diagnosed calculi (not proven) and have only one case where urates were the only symptoms found. From the foregoing I am led to believe that this increased elimination is the primary trouble, and not the secondary, and that the other abnormal ingredients are more or less dependent upon the urates. If it were not so the urates would not be the predominating symptom, but would be the tail of the kite, and not the kite itself.

Let me cite a few of the answers given by patients suffering from this disease: "Dr. I have got kidney trouble. My water burns me when it is voided. Am sore at the meatus urinarius. Pain in my back over the kidneys, it running down into my bladder. Rheumatic pains in my limbs. Water high colored, and stains the vessel

yellow or red with heavy deposit. Yes, I eat meat and eggs three times a day. Yes, I walk a great deal. Ride a bicycle or do heavy work. Yes, I have got dyspepsia, have had it for a few months; noticed the pain in the back about the same time. Oh, I am always constipated, and never have a passage unless I force it by medicine or injections. Have fleeting pains, which disappear whenever the urine becomes light colored. Always have a bad taste in my mouth mornings, and my tongue is coated with dark yellow fur. Am nervous. Get angry easily. Am worried about little things. Have the blues. Eyes are not in as good condition as they usually are. Have heart-burn and eructations of gas. Have headaches." An examination of the urine of such a patient will always show an enormous deposit of urates.

The difference between decreased urates and increased is clinically as follows: First, headache, gastric disturbance, decrease of urine, convulsions, coma, death. In the second, headache, irritability, nervous twitchings, rheumatism, insomnia, melancholia, gastric irritability, decreased amount of urine. A difference only in degree, and not of kind. Nervous symptoms predominate in both, but in first death or recovery is speedy; in the second, unless cured, years of misery and trouble are entailed upon the patient. Patients who have a large amount of urates are apt to have gravel, cystitis, calculi and mild urethritis; also pruritis and disorders of the skin due to acid perspiration. From my own observations I am firmly convinced that seven-tenths of our rheumatic troubles come from this increase, and that if taken in time we can promise our patients great relief, if not an actual cure. My treatment is based upon the clinical history of each case, and I follow this lead to the end.

Diet stands at the head with hygienic measures as an accessory. I cut off all meats of every kind and description, and this is the fundamental treatment. Fish is allowed once or twice a week. Vegetables allowed with bread. All liquors prohibited, especially sour wines. Moderate exercise required. Sitz baths daily in hot water, patients to remain in them until perspiring freely, then to bed. Plenty of fresh air. Unlimited quantities of water, and this must be insisted on, or patients will not drink it. Rest and sleep are requisites.

Therapeutic measures are first directed to the gastro-intestinal disorders. Pepsin and mineral acids, lime juice, lemons, and tonics

are exhibited. As soon as possible I commence the treatment directed to the blood, and to do this I give the following :

℞	Magnesia sulph.....	3	j.
	Syrup lemon.....	3	ss.
	Water.....	3	ij.

M. S. Teaspoonful in $\frac{1}{2}$ glass of water before meals.

℞	Quiniae sulph.....	gr. xxiv.
	Ft. Capsule.....	No. xii.

S. One three times a day.

The result of this treatment, combined with the diet, is usually most gratifying, and the patient improves rapidly under it. At first the complete exclusion of meats bears heavily upon the sick, but in a few weeks its loss is hardly felt or totally absent, and after the patients have broken over the rules once or twice and had a recurrence of the trouble, they will discard nitrogenous foods of their own free will. Let me impress the rule of dietary, as this measure is of the greatest importance, and all medicines might better be dispensed with than to allow your patient to eat nitrogenous foods or take excessive exercise.

I have yet to find the case where the above treatment has failed to do its work, and I firmly believe that if the medical profession would but examine for increased production and elimination of urates by chemical analysis of urine and fluids, with as much regularity as they do for decreased production and retention, and would base their treatment upon its pathological significance, a large proportion of rheumatic troubles and nerve disorders would be materially benefited, if a more gratifying result was not obtained, and complete cure crown the effort.—*The Medical Age*.

THE S. D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.

The Alumni of the Jefferson Medical College have inaugurated the scheme of endowing a Chair of Pathological Anatomy in honor of the great surgical teacher, the late Professor of Surgery in the Jefferson College. We have no doubt that it can be easily done if the matter is properly brought before those peculiarly interested.

Contributions may be sent to Dr. R. J. Dunglison, Treasurer, Lock-box 1274, Philadelphia, and will be acknowledged in the columns of the *Medical News*, of Philadelphia.

NOTES.

IF WE are not too late with this item here it is: The *Texas Courier* (Dr. Ellis) says a good sneeze will cure hiccough.

The *Pacific Medical Journal* says that a *tape worm* was accidentally killed by the child's chewing the bark and bud of a peach twig.

NUSSBAUM is reported to have suggested oil of cloves to disguise the odor of chloroform or ether. Now for something to disguise the oil of cloves, and we suggest iodoform.

A SOLUTION OF GALLIC ACID may be made, according to Dr. F. Long (*British Medical Journal*), by means of potassium citrate. Using 15 grains of each, the mixture will dissolve in 1 ounce of water.

A CONFERENCE OF BOARDS OF HEALTH is called for some time in August at Washington, D. C., for considering means for the prevention of cholera, and of its management should it reach the United States.

REMEDY FOR RHUS POISONING.—A. S. Wiegand says (*American Journal Pharmacy*, July, 1884) that fluid extract of serpentaria will relieve rhus poisoning. Cloths wet with the extract are placed on the eruption without friction.

THE URINE IN DISEASE is the title of a chart of ready reference in urinalysis, issued as a premium to subscribers of THE MEDICAL WORLD, of Philadelphia. It is convenient, and, so far as we have had occasion to consult it, accurate.

VESICATING AND PURGATIVE QUALITIES OF CROTON OIL.—If alcohol is shaken with a certain quantity of croton, the fluid will separate into two portions, soluble and insoluble. The soluble portion is vesicating, the insoluble purgative. According to Dr. Wise (*St. Louis Medical and Surgical Journal*), who has repeated the above experiment after Mr. Senior, a London chemist, he finds that half a minim is the smallest dose that can be given with satisfactory results, but that a minim can be safely given.

The British Medical Journal gives a case of remarkable injury similar to the one reported in the *Journal* in 1882 by Dr. R. F. Lewis, of Lumberton, viz: Complete severance from the body of the arm with the scapula attached. The patient, who was a woman, made a good recovery.

A VALUABLE BEQUEST TO BELLEVUE COLLEGE.—Mr. Andrew Carnegie has given fifty thousand dollars to be expended in the erection of a laboratory building and apparatus for practical work in everything relating to the microscopical and experimental research in different departments of medicine.—*Philadelphia Medical Times*.

The St. Louis Medical and Surgical Journal will, with the August issue, change its editorial management by the retirement of Dr. Thomas F. Rumbold. He will be succeeded by Drs. Le Grand Atwood and Frank M. Rumbold. This journal is an esteemed exchange, and we trust that it will in the future more than sustain its present high standard.

ANOTHER OBJECTION TO IODOFORM.—We thought that all the charges were in against this beautiful, but malodorous drug, but we learn from the *Philadelphia Times* that it has been adulterated with picric acid (not to help the odor). It may be detected by testing by a solution of cyanide of potassium, which gives a brownish red reaction if picric be present—none if the iodoform be pure.

RECTAL ETHERIZATION NOT NEW.—Dr. Gaillard says (*Gaillard's Medical Journal*): "Most of the medical journals contain editorials on this subject, and write of it as something new and valuable. It was advocated by Pirogoff nearly forty years ago—about 1848. Those journals which have misled their readers in this matter, though undesignedly, should give them this piece of information as a supplement.

SOME GOOD ADVICE FROM OLD BURTON.—A third thing required in a patient is confidence, to be of good cheer, and have sure hope that his physician can help him.

That the patient be not too bold to practise upon himself without an approved physician's consent, or to try conclusions if he read a receipt in a book; for so many grossly mistake and do themselves more harm than good."

The American Journal of the Medical Sciences has a handsome frontispiece steel engraving of the late Dr. S. D. Gross. It is admirably executed, and is a very choice memento of the great surgeon.

Dr. David W. Yandell has also had executed a handsomely printed memorial keep-sake, consisting of the inscription from Dr. Gross' tomb.

THE poison of jequirity seeds (*Abrus*) is, according to Messrs. Warden & Waddell (*British Medical Journal*), of Calcutta, not a bacillus, but a substance of an albuminous nature, which they call *abrin*. This substance is similar to that of vegetable albumins. The poison possesses many of the characteristics of a soluble ferment, and its action is comparable to that of snake poison. *Abrin* produces the same effects as an infusion of jequirity seeds.

SIMILARITY BETWEEN TOXIC EFFECTS OF *COCCULUS INDICUS* AND *STRYCHNIA*.—Dr. Francis L. Haynes gives the results of some experiments with *cocculus indicus* (*Philadelphia Medical Times*), and makes the following summary :

STRYCHNIA.

1. All stages of strychnism may be produced at will by the careful regulation of the dose.
2. The patient is perfectly conscious during the convulsions.
3. The convulsions are mainly tonic, as in tetanus.
4. Never causes vomiting.

COCCULUS INDICUS.

1. When a sufficient quantity has been taken violent convulsions occur without definite warning. They are explosive.
2. The patient is entirely unconscious during and after convulsion, as in epilepsy.
3. The convulsions are *mainly* clonic.
4. Frequently causes vomiting.

BED-SIDE URINALYSIS.—Messrs. Parke Davis & Co. have again done the profession a great service by making urinalysis not only a possible thing, but a cleanly, cheap and accurate process. They have devised a pocket case containing test papers in small strips, put together in tablets. Accompanying this is a graduated bulb-pipette, for taking up a measured quantity of urine. Two testubes are also included, and by the means of this compact outfit sugar and albumen, qualitatively and quantitatively (approximate for practical use) may be determined. To those of our readers who are cultivating more exact clinical methods, and to all those who have to make official analyses, we commend this simple outfit. It contains all the latest tests for albumen and sugar.

MEDICO LEGAL ASPECT OF EMBALMING WITH ARSENIC.—The widely extending employment of preserving fluids containing arsenic for embalming dead bodies is at last bringing us to consider the legal questions involved. The impossibility of determining the presence of poisons in persons so embalmed is obvious, and the facility with which the fraud can be practiced to cover up arsenic-poisoning is a subject for legislative enactment.

TO FACILITATE THE EXAMINATION of the organized sediments in highly concentrated urine, or urine passed in febrile conditions, Mehu adds to the sediment, after most of the urine has been drawn off, a small quantity of a saturated aqueous solution of sodic phosphate. This dissolves the pigments and urates, and renders the examination of the organic deposit comparatively easy. No harm is done by an excess of the phosphate.—*St. Louis Medical and Surgical Journal*.

WOMAN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY.—An examination of the Catalogue of the above institution shows a most praiseworthy scheme of education, which could very profitably be adopted by Medical Colleges for men. The College course consists of a continuous session of eight months, extending over a compulsory course of three years. In the first year anatomy, chemistry, physiology, materia medica and histology are taught. The second year anatomy, physiology and chemistry are repeated, and to these are added elementary studies in pathological anatomy, practice, surgery, obstetrics, therapeutics and hygiene. The third year pathological anatomy, practice, surgery, obstetrics, therapeutics and hygiene are completed. Attendance on College clinics are required, and each student has the privilege of attending ten cases of obstetrics, of witnessing operations in the infirmary and at other hospitals, and may listen to clinical lectures given in the Bellevue amphitheatre. An examination is held after each year's course, and in addition to the final examination by the faculty of the College are again examined by a Board composed of professors from different medical colleges in the city.

We neglected to state that either a diploma from a recognized college or a preliminary examination is required. Why cannot all of our colleges do as well?

SQUIBB'S EPHEMERIS for May is as usual full of valuable matter. The first is a practical article on *Constipation*. He states that an "insufficient supply of water or of succulent food is probably the ultimate cause of three-fourths of the cases of ordinary constipation. The appetite for liquids which, under strictly normal conditions, would regulate the supply to the demand, is, under the conditions of civilized life, largely controlled by habit, and habits are often established by thoughtless concessions to convenience." * * * "A good way—if not the best way—of taking water is in the form of fresh fruit, and when fruit stands get to be as numerous in the streets as mineral water stands, and dishes of fruit more common on tables at meal times, there will be less constipation. In fruit the water is so combined with mucilaginous, saccharine and acidulous elements that it is not so easily or so rapidly absorbed from the residues, and the residues of many fruits, such as the very wholesome banana, are larger and more pultaceous than from other foods." * * * "In short, a copious supply of water is as necessary to the internal as to the external cleanliness of the animal economy, and no system of individual drainage and sewerage can be natural or effective without it. Internal cleanliness is quite as near to godliness as external, and is as much the law of health; and as a law it has been quite as long known—quite as often broken and with the same penalties."

This number of the *Ephemeris* is largely devoted to the consideration of *Alcohol*, chemically, commercially and physiologically. We welcome this periodical as one of the most valuable of our exchanges, and we desire at this first opportunity to correct a singular error into which Dr. Conner, of the *Detroit Lancet*, fell into in saying that the *Ephemeris* is published in the interest of Dr. Squibb's preparations. From the first number to the last, either in editorial or advertisement pages, has there been the slightest allusion to manufacturing business, for which Dr. Squibb is so justly famous. We quote a paragraph on *Alcohol as a food*, which bears peculiar emphasis, and will no doubt modify the views of many.

AT A MEETING of the Executive Committee, held at the Museum of Hygiene in the city of Washington May 7th, it was decided to hold the Twelfth Annual Session of the Association on Tuesday, Wednesday, Thursday and Friday, October 14–17, 1884, at St. Louis, Missouri, and to present the following topics for consideration :

1. Hygiene of the Habitations of the Poor.
2. Hygiene of Occupations.
3. School Hygiene.
4. Adulteration of Food.
5. Water Pollution.
6. Disposal of Sewage by Irrigation or Chemical Action.
7. The Observable Effect upon the Public Health of Official Sanitary Supervision.
8. The work of Municipal and State Boards of Health.

Persons intending to present papers on any of these subjects are requested to notify the Secretary at once, and to furnish him with a condensed abstract of the same not later than September 1st. Members desiring to participate in the discussion of these papers are also requested to inform the Secretary.

It is requested that the complete papers shall be in the hands of the Secretary at least three days prior to the meeting, as all papers must be examined by a committee before being read. They may be sent by mail or express to the Secretary at his office prior to the 1st of October, after which date to his address at St. Louis, Missouri, care of Dr. Jos. Spiegelhalter.

Active and associate members have equal rights and privileges in the presentation and discussion of papers.

Extensive preparations are now under way for making this the largest meeting that the Association has ever held, and the committee urge the attendance and coöperation of persons in all trades and professions interested in the advancement of public health and general sanitary science.

A circular, giving full and concise information regarding local matters, programme, transportation, etc., will be issued in due season before the meeting.

All inquiries of a local character should be addressed to Dr. Jos. Spiegelhalter, Chairman of Committee of Arrangements, St. Louis, Missouri.

Volume IX of Public Health is now published, and will be immediately mailed to all who have paid the annual assessment for the year ending October 31, 1884. Any one who may fail to receive said volume will please notify the Treasurer. Members in arrears will be furnished promptly with the volumes of the Savannah, Indianapolis or Detroit meetings, upon sending a check or money-

order of five dollars for each volume or year to the Treasurer, Dr. J. Berrien Lindsley, Nashville, Tennessee.

EXTRACT FROM CONSTITUTION. ART. III.

The members of this Association shall be known as *Active* and *Associate*. The Executive Committee shall determine for which class a candidate shall be proposed. The *Active* members shall constitute the permanent body of the Association, subject to the provisions of the Constitution as to continuance in membership. They shall be selected with special reference to their acknowledged interest in, or devotion to, sanitary studies and allied sciences, and to the practical application of the same. The *Associate* members shall be elected with special reference to their general interest only in sanitary science, and shall have all the privileges and publications of the Association, but shall not be entitled to vote. All members shall be elected as follows:

Each candidate for admission shall first be proposed to the Executive Committee in writing (which may be done at any time), with a statement of the business or profession, and special qualifications of the person so proposed; on recommendations of a majority of the committee, and on receiving a vote of two-thirds of the members present at a regular meeting, the candidate shall be declared duly elected a member of the Association. The annual fee of membership in either class shall be five dollars.

It is hoped that every member of this Association will endeavor to forward its grand objects by taking a personal interest in its humane and philanthropic work, and by securing and forwarding to the Secretary the names of worthy men and women, in whatever profession or trade, for membership. Even those who cannot attend the annual meetings will be more than compensated in receiving the large, valuable and beautiful volume annually published by the Association.

By order of the Executive Committee,

IRVING A. WATSON, Secretary.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.—Heretofore, to obtain membership in the National Association, it was necessary that one should be a delegate from some local medical organization, and after having served as such he could retain his affiliation by paying the annual dues. Each member, therefore, must have attended a meeting of the Association. This has resulted in depriving many physicians of the privilege of connecting themselves with the Society, who, in other respects, have been in hearty sympathy with it, and who would have joined had circumstances

avored their complying with these requirements. At the meeting in Washington an amendment to the constitution was adopted, which provides for the admission of members by *application*, in addition to the previous methods. Under the provisions of this act any member of a State, county or local Society, recognized by representation in the American Medical Association, who is himself in good standing in the local Society to which he belongs, may become a member of the National Association by making application in writing, and accompanying such application by a certificate of his good standing, signed by the President and Secretary of the Society to which he belongs, and the payment of the membership fee (5). Such application can be made at any time to the Treasurer, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pennsylvania. This entitles the applicant not only to membership, but receive the *Journal of the Association*, which should be in the hands of every medical man in the country who regards his profession with any degree of pride.



TO OUR ADVERTISING PATRONS.

The advertising pages of this JOURNAL have been placed in the hands of Messrs. JACKSON & BELL, the proprietors of the printing establishment from which the JOURNAL has been issued from its foundation in 1878. Immediate steps have been taken to enlarge our circulation and increase advantages to our advertisers. All letters relating to advertising must be addressed to JACKSON & BELL, Wilmington, North Carolina.

All letters from subscribers should be addressed to the Editor, Wilmington, North Carolina.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

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ADDRESS OF H. B. PIERCE, M.D., RETIRING PRESIDENT,
ON THE DUTIES OF THE HOUR.

Delivered before the Medical Society of North Carolina, at Raleigh,
N. C., May 21, 1884.

Gentlemen of the Medical Society of North Carolina:

I shall not attempt in the short time allotted to me on this occasion, amid the hurry and confusion incident to the closing scenes of an assemblage like the present, to enter into any disquisition on the science of medicine, or to add anything new to the achievements already won in the great field of experimental knowledge. My purpose is simply to offer some few practical suggestions by which we as professional gentlemen shall be benefited and the great objects of our Association shall be promoted.

The present is an important era in the history of the medical profession in North Carolina. Influences both in and out of the

profession are operating to an alarming extent on the future prosperity of the profession we represent. And while I am no alarmist or croaker, I would call your attention to some of the existing evils, as I conceive, and thus shall address myself to what I denominate

THE DUTIES OF THE HOUR.

In this our southern land nothing has had a more deleterious effect on the prospects of our profession than the present depressed condition of our country in a financial point of view. It has not only rendered inefficient the efforts of the best men of our profession, paralyzing their energies and blasting their prospects for gaining a successful livelihood from their calling—it has at the same time had a tendency to flood our country with a set of individuals whose only aim has been personal aggrandizement, to take advantage of the times and to fatten on the misfortunes of their fellows. True it is, the field is a wide one, the harvest is plenteous and the results to be achieved are grand and imposing, but the laborers are dispirited, the burdens are onerous and the rewards are few.

I take it for granted in our finite nature that no great work can be accomplished, no great success can be attained in life without the proper rewards for labor, be it physical, intellectual or moral. Physical labor, the employment of muscle in its achievements, must have its reward in raising its possessor above want, or it dwindles into insignificance and the mere gaining a scanty subsistence to keep body and soul together. The dignity of labor is destroyed, and the human being relapses into a condition but little removed from the brute creation. Just so with intellectual and moral labor, or all of them combined. The individual in every avocation of life must be rewarded for his labor, must be placed above the reach of want in order to pursue successfully his avocation in life.

This brings us to the first duty of the hour: A demand from the public for a just recognition of our claims and an equal participation in the benefits of legislation with every other avocation and pursuit in life.

Disguise the facts as we may, the subject of the collection of medical fees in a great many sections of North Carolina is paramount to every other question that can engage the attention of the profession, much of the fault lies at our own door and within the circle of the regular profession of our country. There are those

practising in almost every community who fail to demand their fees regularly when due, which operates injuriously upon those who pursue a different plan and expect to live by their profession. By concert of action in this matter of demanding our fees when due, much might be done in accomplishing the desired end. While I am of the opinion that no regular fee bill can be strictly enforced, yet much can be accomplished by demanding regularly our fees, be they great or small, and informing the public that we expect to be paid.

This alone, however, cannot accomplish the end unless our efforts are seconded by the law-making tribunal of our land. It is mockery to tell us that it is unconstitutional to pass such a law, and there is nothing upon which to attach a lien, when every laborer who works a day or a week on your farm, creates a lien on your property, and every mechanic who strikes a lick on your houses or tenements creates a lien on the property upon which he bestows his labor. All we want is to be placed on an equal footing with the mechanic and common laborer of our country. Let our fees be collectable, to a certain amount, at least, and there will be no further difficulty in the matter. All we want is a recognition of our rights and to be placed side by side with the other avocations and pursuits in life. If this cannot be done in accordance with the Constitution, let all class legislation be repealed, and let all that a man possesses be subject to his debts. Place everyone on an equal footing as regards the collections of debts. I know that the embarrassed condition of our country since our late troubles have called loudly for class legislation and exemptions, but it is high time the eyes of the country should be opened to the great injustice practiced upon certain professions and occupations. Class legislation has been the bane of our country for the last few years—the creation of monopolies in everything, and no people have suffered more from it than our own profession. Abolish everything in our body politic that has a tendency to create monopolies, and let free competition be the rule of our action for the future.

Another duty we owe ourselves as members of the medical fraternity, is to request of the Press a just recognition of our claims, and to raise our voices against the practice but too common of the Press giving aid and comfort to the venders of secret medicines and quack nostrums. It does seem that the public Press, and especially the religious Press of our country, would have respect enough for

the regular profession to their influence on the side of legitimate medicine. What incentive can there be to erect a high standard of medical qualifications when every nostrum-vender comes into legitimate competition with us by the approval of the Press, sustained, in many instances, by the unprofessional *distingué* of the land? We can hardly take up a newspaper, be it secular or clerical, but that we behold emblazoned to the world "Honourables," "D.D.'s" and other distinguished characters, giving their sanction to the secret medicines and patent nostrums of the day. In the language of a contemporary: "The pecuniary interest of the public Press in relation to public health, so far as means and methods for the cure of disease is concerned, is identical with the pecuniary interest of advertising quacks. The public Press lends itself to the diffusion of the ways and means of medical quackery in all its protean forms. The subsidies of travelling impostors and of patent medicine men fill one of the largest arteries of support for the newspaper print of all degrees and kinds, and the influence on the public mind of the smallest member of the Press, no matter how weak or imbecile may be the intellect that bestrides the tripod, is more potent than the teachings of a hundred of the ablest minds that adorn the profession of medicine."

I feel I would not be doing my duty to the profession or the public did I not raise my voice against this abuse of the public Press.

Another abuse and practice to which I would call your attention is that too common, I fear, of the druggists of our country prescribing in many cases and refilling prescriptions of physicians without their consent or knowledge. While in the first instance they are entirely out of their sphere, thereby injuring the regular profession by gratuitous advice, in the second place they are appropriating to themselves what does not belong to them, and for which they are justly amenable to the law. We hope that the bare mention of this subject is enough, and that "a word to the wise is sufficient." Every one who thinks at all must see the injustice to the profession and the danger of such a course to the public.

Having noticed in a cursory manner some of the duties of the public to the profession, we propose to notice some of our duties to the public.

The question of prescribing stimulants in disease generally is

demanding considerable attention among the profession, and as such demands our notice.

Professor Carpenter has summed up the beneficial effects of alcoholic stimulants under two general heads :

1st. Recovery from shock from any cause, and

2d. In the treatment of acute disease from continued fevers, resistance to morbid agents, recovery therefrom and the consequent prostration that follows.

The following declaration respecting alcohol has recently been published in the British medical journals. It is signed by two hundred and fifty-four physicians and surgeons, including some of the most distinguished names in the profession in Great Britain, Its appearance has naturally excited much criticism :

"As it is believed that the inconsiderate prescription of large quantities of alcoholic liquids by medical men for their patients has given rise in many instances to the formation of intemperate habits. the undersigned, while unable to abandon the use of alcohol in certain cases of disease, are yet of the opinion that no medical practitioner should prescribe it without a sense of grave responsibility. They believe that alcohol, in whatever form, should be prescribed with as much care as any powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess or necessarily for the continuance of its use when the occasion is passed.

"They are also of the opinion that many people immensely exaggerate the value of alcohol as an article of diet, and as no class of men see so much of its ill-effects and possess such power to restrain its abuse as the members of their own profession, they hold that every medical practitioner is bound to exert his utmost influence to inculcate habits of general moderation in the use of alcoholic liquids.

"Being also firmly convinced that the great amount of drinking of alcoholic liquids among the working classes of this country is one of the greatest evils of the day, destroying more than anything else the health, happiness and welfare of those classes and neutralizing, to a large extent, the great industrial prosperity which God has placed within the reach of this nation, the undersigned would gladly support any wise legislation which would tend to restrict within proper limits the use of alcoholic beverages and gradually introduce habits of temperance."

One of our cotemporaries, Dr. W. L. Lipscomb, of Mississippi, has handled this subject of the use and abuse of alcohol in such glowing description that I do not hesitate to adopt his language, and I offer no apology for repeating it before the Medical Society of North Carolina. It was read before the Columbus and Loundes County Medical Association in 1874.

"It is needless for your essayist to state to this Association that great diversity of opinion exists as to the action of alcohol on the human system. This has always been the case and will be so to the end of time. It cannot be otherwise while men's minds are different. It could not be different unless the knowledge of man approached the infinitude of God.

"Alcohol represents one of those great agencies in the natural universe that touches so directly upon the function of vitality that the supreme architect has purposely removed it from the perfect comprehension of the human mind—or the human mind has become so clouded by the effects of sin that it is unable to grasp it.

"Life, viewed from its great dual standpoint of construction and destruction, of organization and disorganization, of growth and decay, finds in alcohol one of those important supplementary agencies whose claims cannot be disregarded and whose use will be continued (despite terrible evils resulting from its abuse) as long as man aspires to perfection of function and duration of life, on the one hand, and battles against weakness and death on the other. Take the circle of human existence and place life at any one given point and you will find alcohol one of those great, incomprehensible agencies that stands ready with appropriate balances to preserve it in its appropriate place and to restore it in the event of dislocation,

"The dream of the alchemist failed because of a want of ample knowledge of the use of alcohol as applied to the diseases of men. The distinguished author of the Brunonian system, with one hand throttling the monster disease and holding his bottle of brandy in the other, presented no mean caricature of the true physician. The only error in the picture was the dimness of his intellectual eye. He could not bring the power of the one against the evil of the other.

"What is life? Life is the blood. Nutrition is the dominant function of existence. Disease is a disorder of nutrition.

"Life is electricity, with the brain for its battery and the nerves for the wires of distribution. Disease is a disorder of innervation.

“Life is heat. Death is cold. Disease is a disorder of temperature.

“As a presiding angel over the great function of life, or if you prefer it, as a vigilant sentinel, guarding the doors of the ‘Atria Mortis,’ stands alcohol.

“Has nutrition become feeble from the want of a requisite supply of food? Alcohol supplements the deficiency by arresting the waste of time until the supply can be increased. Has nutrition become deranged by the presence of inappropriate material? Alcohol supplements the forces of digestion and overcomes the resistance. Is nutrition failing because of a tardiness in the elements to reach their appropriate destination? Alcohol sends the blood faster to its place of duty. Is nutrition heavy, with excess of effete matter? Alcohol can put the heart and lungs and every emunctory on double duty to effect its discharge. Does nutrition need assistance in the selection of the secreted elements? Alcohol claims special control in that department. But disease is a disorder of innervation! Alcohol refreshes the weary brain and stimulates the exhausted nerves. Alcohol obtunds sensitiveness and deadens pain. Alcohol brings refreshing sleep and averts the blow of the deadly poison. Alcohol supplies mental deficiency and controls the excess of the mania. But life is heat. Disease is a disorder of temperature! Alcohol is the friend of heat and a most active antipyretic! Alcohol warms if you are cold and cools if you are hot. It is alike the enemy of shock and the foe of fever. It puts the thermometer at exactly 98° and keeps it there, despite of lazy lungs and an unfaithful stomach. Alcohol strides the whole domain of temperature and assists or controls the supply of animal heat at any or all of its numerous sources. If alcohol has these influences upon the centres and functions of life, is it a wonder that there should exist in all nations a natural appetite and a ready acquisition of its habitual use? Is it a wonder that it has become the poor man’s friend and the rich man’s delight? The lethean of the miserable and the catholicon of the sick?”

Could I drop the curtain here and expose to your view only the bright side of the picture, with all its alluring charms, it were perhaps well; but there is another side to the picture, and duty forces me to present it to your view. In the language of the writer :

“An agency so powerful for good is equally powerful for evil. Force power in any department of nature misapplied produces dis-

order, friction and destruction. So alcohol is a force, a mighty force! a power, a tremendous power! and wherever applied is either good or evil. No matter what the motive or intentions dictating its use, its laws are inexorable—it will benefit or injure—it will kill or cure. The draught of ignorance, the cup of science, nor the hand of benevolence can restrain its inherent activity or power.

“The world is full of the evil of its application; disease fattens in its ignorant use; death and hell luxuriate on its abused potentiality; men see the evil everywhere; the temperate proclaim from every pulpit and rostrum; the poor inebriate does not deny it; medicine, intelligent medicine, looks with horror and dismay at its frightful ravages; more evil results to man from alcohol than all the other agencies put together; it engenders disease in every part of man’s organism; it interferes with every function of life; it accelerates all the forces of decay and death. And the evil is constantly increasing; the bad effects are increasing in terrible ratios; its powers and influences are irresistible and threaten the whole world with misery and ruin.

“What a wonderful combination for good and evil in a single agency! What a contradiction of results! What a problem for study! What a field of investigation for the philosopher, the scientist and the Christian!”

Any attempt to enter the arena of thought would require more time than your essayist feels permitted to use; but he asks permission to present the following propositions:

1st. The extensive and powerful agency of alcohol for good to the human organism is a demonstrated and a demonstrable fact.

2d. The evil effects are as much more extensive and powerful as sin exceeds virtue and ignorance exceeds knowledge.

3rd. That the good may be enjoyed and the evil avoided by the establishment of virtue and knowledge and the eradication of sin and ignorance.

4th. That Christianity and education are the only known factors of this desirable result. To arrest the spread of this terrific evil until these two forces can be properly developed and operated, your essayist would recommend that mankind be taught by every conceivable method the following truths regarding alcoholic liquors:

1st. That alcohol is a poison and not an aliment of food, and should never in any case be taken by a person in health.

2d. That the poisonous effects of alcohol are discoverable in a desire or thirst for its use, and whether that thirst or use be temperate or intemperate, a certain and progressive poisonous effect is going on in the human system.

3rd. That the poisonous effects of alcohol are transmitted from parent to offspring.

4th. That the benefits of alcohol in disease are limited by a return to health, and that its poisonous effects are antidoted by the diseases it cures. Hence alcohol, properly administered in disease, never produces drunkenness.

5th. That alcohol is much more dangerous taken in health than in disease.

6th. That the manufacture of alcohol, like that of money, should be the province and duty of the Government and under its exclusive jurisdiction.

7th. That the improper use and sale of alcohol should be put on a footing with other poisons and the offenders punished by law.

8th. That the medical profession owe to themselves, to science and the great cause of Christianity and education a demonstration of the proper use of alcohol and a plain, faithful, scientific exposition of the evils resulting from its abuse.

Thus I have endeavored to present this subject to you from a strictly medical standpoint, and while I may seem to some to have overestimated its effects as a remedy in disease, I certainly have not undervalued its importance as a great factor in the animal economy.

In view, then, of the great importance of this great factor in disease and health; in view of the multitudinous forms in which it is offered for our use and scattered broadcast over our land, would it not be well that we pause and reflect and consider whether or not some means could be devised which would give us the remedial effects of so potent a remedy without its wholesale use and prescription, which has been but too common by many of the profession of our country. In view of the many infamous preparations which are daily being put forth in wines, brandies and beers, would it not be well for the medical profession "to use alcohol as such, and not in the form of special manufactures."

In the language of a writer who has made this subject his study: "We know that liquors prepared by strictly natural methods are not constant in composition; we know that under the exigencies of trade

additional conditions of variation are produced, and even complete substitution brought about. I have thought for some time that the best way to secure entire constancy in the therapeutic use of alcohol would be to have the preparations made up by regular prescription or printed formula in the *Pharmacopœia*. The substances which exist in wine, beer and brandy are in accidental mixture—some are useful, others are useless. Why should we not have the useful articles properly combined by competent hands, and the useless omitted, and the physician, instead of ordering special wines, etc., prescribe such proportions as may be necessary of alcohol, water," etc? "These prescriptions, like others containing powerful ingredients, should be renewable only at the instance of the physician."

Another question of vital importance to the human family—the abuse of another patent remedy in disease, which has assumed a very grave aspect—is the opium habit, to which I would call your special attention. Is the profession responsible for the rapid spread the habit has made for the last few years? And can any means be devised by which it can be corrected or its deleterious effects lessened? I have had my attention drawn to it so vividly recently by a medical friend, that I almost shudder when I think of the horrors of the dreadful habit, and I feel that I would not be doing my duty to the profession or the public did I not direct your serious attention to the matter. And I fear that it has been brought about frequently by the too careless prescription of our medical brethren. While opium in some of its forms is a remedy which cannot be dispensed with in medicine, yet I feel satisfied that much damage has been done in the formation of the habit by the too frequent and too careless administration of the drug. The prolonged use of it in no case should be advised, and whenever it can be administered without the knowledge of the patient, it is a duty we owe to humanity to avail ourselves of the opportunity. The habit, when once formed, is more exacting in its demands and deadly in its operations on the senses than the habit of intemperance in ardent spirits, and while it does not produce such general perversion of the moral sentiments as exhibited in external depravity, it obtunds every moral sentiment and stupefies every faculty of the mind. While much may be expected from the profession in arresting the development of this habit by wise counsel and timely precaution, it is to the apothecary and druggist that we must look for the aid which will be necessary

to accomplish this desirable end. Stringent laws with regard to the sale of the drug, except as a medicine, and the proper preventive of the druggists in the sale of the drug could do much in arresting the dreadful evil. Where is the moral difference between selling a large quantity of opium, or any of its preparations, to the slave of the opium habit knowingly, and selling whiskey to the besotted inebriate?

The more to be lamented, this habit is more frequent among the women of our land than the men. In my limited observation five women are addicted to the habit where there is one man. The more to be deplored, because these are the mothers of our land; and what, I ask, is a mother, who is the slave of the opium habit? It is an object the quintessence of pitiable. Doomed to a vice that obliterates every moral sentiment, that stupefies the intellect, that renders ineffective the will, that "causes her to sacrifice friends, honor, truth, health, religion, home and the necessities of helpless children!" What object, I say, could be more pitiable. And yet we have this spectacle daily exhibited to our view, and we look on with complacency, and make no effort to stay the tide that threatens to engulf our homes, our firesides and our loved ones.

Another subject that demands your consideration is medical education. The future destiny of the medical profession, to a great degree, is in the hands of the regular medical profession of our land. The avenues that lead to the sanctuary of medicine have their beginning in the office of the private physician. Much depends upon you for wholesome advice and wise counsel at the very threshold of the student's career. Due regard should be had, not only to the welfare of the applicant, but to the good and well-being of the profession you represent. Guard well the outer door of the profession by discouraging any applicant believed to be disqualified by preliminary education or moral qualities. It is a mistaken idea that when a young man is fit for nothing else he is qualified for the study of medicine. In the language of a cotemporary:

"Why should the feeble or half-fledged intellect, which is unable to turn the disc of illumination upon the truth of the simplest science, be required to light the deep and tortuous labyrinths of medical philosophy?—that manifold science, either one of which great branches would employ for an age the labors of the grandest intellect, and yet its boundaries would be half surveyed, its domain but half explored; that

science which taxes the resources of earth, and air and sea, levies its contributions on every department of nature and girdles the world in its circuit.

“To fulfil the highest obligations and responsibilities of the practice of medicine, no business demands more intellectual vigor, more mental discipline, more compass of reason, more deliberate judgment, more depth of conscience and more moral courage and self-reliance.”

And on you, gentlemen of the Medical Board of Examiners, much is devolved in carrying out the great objects of our mission. Guard well the inner door, the “sanctum sanctorum” of the profession in North Carolina. There may be those of small brains, of limited preliminary education, of fox cunning, of parrot information, with the venom of asps between their lips and the sting of the viper on their tongues, who may possibly seek to enter the sanctuary, who are only actuated by mercenary motives. Seek diligently to find out all such, and spurn them as you would the serpent from your bosom. Their association is only ruin, and their contact is death.

Lastly, gentlemen, I would urge upon you the necessity of maintaining a high standard of medical ethics in the profession you represent. In the language of another :

“Physicians have, as a class, like every other class of men, what has become to them a code of manners—a system of medical ethics—that certain rule of politeness, of good breeding, of high courtesy, as simple as the salutations of the morning or the manners of the thoroughfare, and as free and as pure, and as free from evil as the moral law. Medical ethics is the crystalization of the morality and charity and refinement of the profession, and is as indispensable a part of the medical gentleman as the purity of his own character and the inbred instincts of his own refined nature. An educated physician can no more violate the regulations of his code than a polite gentleman can trample upon the rules of society. Medical ethics is no procrustean bed to amputate and trim the profession into the same shape and mould ; it is not the register of the oaths of a secret, clandestine association of public enemies ; it is not the regulations of a ring of public plunderers. nor a concoction of selfish means for the advancement of a set of arrogant bigots or greedy cormorants, who feed and fatten upon the public welfare. Medical ethics is the oil that lubricates the friction of a great philanthropic profession, and keeps in unison and harmony the parts of a complex whole. It is the golden rule of the science: ‘Thou shalt

love medicine with all thy soul and mind and strength, and thy brother physician as thyself.' Its grand design was to root selfishness and meanness out of the profession and to separate medicine from the world of barter and trade, and to preserve its own inherent, philanthropic and disinterested standards of action. Organize medicine to-day on the basis of trade, turn loose all the devil, and Yankee and Jew there is in the doctors, and in one twelvemonth they would bankrupt California and the Indies and the plethora of their pretense would exceed the repletion of the public treasury. Who are the rich men of your cities? Are they the regular faculty of medicine? No, sir! They are the men who trade in human health and sell medicine according to the chances and circumstances that surround the victims on whom they operate. The credulity of the sick, the ignorance of the multitude and their own sordid souls constitute their stock in trade. Regular medicine has no secret nostrums to sell, no patented inventions to protect, no universal theories to teach, no universal catholicons to cure, no blazing placards to advertise."

Exclusiveness in nothing, and participation in everything that has a tendency to improve mankind and elevate the standard of professional character should be our aim as members of the Medical Society of North Carolina. Broad and catholic in our objects and aims, we are bound by no limits of thought and circumscribed by no isms, or or parties, or creeds; "no pent-up Utica contracts our powers, but the whole boundless realm of thought is ours!" Our domain is as broad as the universe, as high as the heaven above us, and as deep as the earth beneath us. We draw our resources from earth, air and water. The surface of the earth, with its teeming millions of vegetables and plants; the depths of the earth, with their vast mineral resources; the air, with its various elemental components; water, with its varied and multiplied uses—all, all are subservient to our will, and form the admamentorium of the true physician. The Author of our being, "not content with every food of life to nourish man;" "not content to make all nature beauty to his eye and music to his ear," has kindly bestowed upon the herb and flower of the garden a balm for the ills and woes of life. Our object is to extract good from all, and while we are no homœopathists, or hydropathists, or eclectics, or allopathists, which is a misuomer and a reproach to regular medicine, we are willing to acknowledge good wherever we find it, under whatever guise or name, and if I may be allowed to coin a word, I would designate

our name as "Omnepathists"—the application of all remedies to disease.

And thus, my fellow-members, I have endeavored, in my feeble way, to direct your thoughts into a channel which I hope may prove profitable in the future, if not entertaining for the present; and if I have succeeded in exciting within your bosom one higher thought or nobler aspiration for the welfare of your profession, my object is accomplished—my task is done. Would it were worthier.

CONGENITAL OCCLUSION OF THE RECTUM.

By F. DUFFY, M.D., Newbern, N. C.

Read before the Medical Society of North Carolina, at Raleigh, N. C., May 21, 1884.

Congenital occlusion of the rectum, or anus, is not of very frequent occurrence, yet is sufficiently common to be treated of in all works on general surgery to which I have referred, and especially in works on the surgical diseases of children. It is a malformation, usually from arrest of development in the fœtus, or, as has been suggested, may occur from intra-uterine inflammation of the rectum, by which its adjacent walls become agglutinated and organic union occurs, completely occluding the natural outlet of the bowels. In the development of the fœtus, after the separation of the vitelline membrane into the internal and external blastodermic layers, the alimentary canal is formed by the growth and prolongation of the internal layer, while the outer surface, which envelops or encloses the abdominal cavity, is formed by the external blastodermic layer. The anus is the point at which normally the lower prolongation of the alimentary canal, viz: the rectum, and external blastodermic membrane again come together; their opposing surfaces form a septum, which normally disappears by interstitial absorption. Should this septum not disappear, it will present a wall of varying thickness, situated, it may be, externally at the anus or at any point within an inch up the rectum.

These cases are comparatively simple, and especially when the

septum is external or is very thin. Of much more serious nature is the class of cases in which in the process of development the rectum does not extend very near to the anus, but terminates in a blind pouch which in extreme cases may not approach nearer than to the brim of the pelvis. It is to this more serious class of these malformations that I desire to call the attention of the Society, giving two illustrative cases upon which I have operated, both successfully, as far as establishing an outlet is concerned, but in only one of the two successful in saving the life of the child.

Case 1st.—Male, probably an eight-month's child, small, but apparently well formed, the anus was patulous and natural in appearance, the bowels did not move, and an injection was administered by the nurse, who failed to discover the trouble: Unfortunately castor oil was administered, which caused straining. An exploration of the rectum revealed an occlusion at a point not less than an inch from the internal sphincter. This discovery was on the fourth day from birth. It then being night, arrangements were made for an operation next morning, my brother, Dr. Charles Duffy, assisting me. An incision was made upward in the normal direction of the bowel—I may say incision after incision—the parts being dragged down as much as possible with forceps and hooks. The child was very seriously wounded and a point reached beyond which it was hard to go, but the bowel was not reached. We then desisted from our attempt, regarding the case as likely a hopeless one. I returned next morning; the oozing of blood had ceased, and on passing the index finger up the incision I thought I could detect fluctuation. I passed a forceps in and seized the part, dragged it down and clipped it with a scissors. A quantity of meconium flowed—the bowel was open. In my first attempt I had dissected through the tissues up to the blind pouch, in which the bowel terminated; in my second it was comparatively easy to reach. The discharge from the bowel continued very freely. The child took nourishment and had no vomiting. Symptoms of peritonitis supervened, and the child died on the tenth day after the operation. The father of this child told me that the grandmother had a child in the same condition, which died in Goldsborough in the practice of Dr. Moore.

Case the 2d.—Child male; delivered by my brother, Dr. Charles Duffy, and the rectum being examined was found patulous for an inch within the anus; no obstruction was then noticed; the bowels

failed to move; an injection was tried, but was seen to return. A further exploration revealed an occlusion. *No cathartic was administered.*

I wish to call particular attention to the fact that this child was operated upon within twenty-four hours old, and that he was placed under the influence of chloroform sufficiently to render him insensible to pain.

A bistoury was inserted within the anus and the sphincter freely cut through in the median line in the direction of the coccyx. This greatly facilitated the operation, but added to the hemorrhage, which soon became formidable for so young a subject: With scissors and knife the incisions were carried forward in a direction along the hollow of the sacrum, at least sufficiently low to avoid the bladder, until it seemed that at least an inch of tissue had been cut through, which, considering the relative proportions of the young child, is a great distance for that region. The hemorrhage was very considerable, the bottom of the wound very hard to reach, and no knowledge as to where the bowel would be found, if, indeed, it could be reached at all.

At this juncture I took a hypodermic syringe, having a needle of large calibre, and pushed the needle along the index finger of the left hand, which had been pushed to the bottom of the wound, and thrust the needle deeply in a direction a little upward, having judged that the point of my finger was about at that point where the normal rectum in its descent from the left sacro-iliac synchondrosis reaches the middle line of the sacrum. I drew the piston back and the syringe contained meconium. It was no little trouble in such narrow and deeply-seated parts to follow this slender guide with instruments into the bowel, and before I succeeded in doing so the needle got out of the bowel.

A second time I introduced it, and my brother passing a notched probe along the needle, soon succeeded in getting an opening, through which the meconium passed. A uterine dressing forceps (on account of its long blades) was slowly worked through the wound and into the bowel. The handles were then separated so as to dilate or tear the parts a little.

For several days hemorrhage gave great trouble, and it seemed highly probable that the child would die from that cause. Injections of cold and of moderately hot water were used; also alum

water. A soft tube (one taken from a nursing bottle) about the size of a No. 10 English catheter was kept in for a time, but it caused straining and was hard to keep in situation.

The distress which this tube caused deterred us from introducing any other foreign body to control the oozing by pressure. The child was fed at short intervals with milk from the mothers' breast, even when only a few drops could be gotten down; also a little brandy and paregoric were given. Perhaps to the lady who had him in charge is due the credit of his having lived through this ordeal.

Dilatation with forceps was for a few days performed daily, and injections of warm water two or three times a day, given with a small piston syringe.

In about two weeks the opening had so contracted that a second operation was necessary. He was chloroformed and the closed blades of a uterine dressing forceps were pushed through the contracted part, then expanded, and an arrow bistoury run in, and an incision made in the middle line downward; after which a No. 12 Jacque's catheter was inserted; dilatations by the dressing forceps and catheter were practiced almost daily, but could not prevent the contraction. In a few weeks it would be necessary to cut again. For subsequent operations we used Civiaux's bistouri caché, setting the instrument at the desired depth and cutting as it was withdrawn.

To the present time four operations have been done since the first—the last, four months ago, more thorough than the rest, the concealed bistoury being made to cut in three directions, downward and bilaterally, since which time most of the dilatation has been done with the metallic nozzle of the suction syringe for injecting.

The child is now seven months old, well and fat. He has no trouble from his bowels that we can perceive; he continues to be rather pale, which seems to verify the notion of midwives, that losses of blood in early infancy produce this effect, even to a later period.

I trust I will be excused for further occupying your time by briefly reviewing the surgical literature of this subject, as given by some of the authors which have been at my command. I shall endeavor to show a better method for the performance of this operation than any I have yet heard of, though both Guersant and Ashurst refer to plans not very different.

First, as to when to operate, Guersant (*Surgical Diseases of Children*) says: "It is better not to operate immediately after birth, but wait until the meconium descends and dilates the lower part of the intestine." For the methods which have heretofore been practiced it would seem better to have a dilated intestine, but this advantage is purchased at some expense to the child, at least in some instances, as the meconium is formed during fœtal life and in some instances is discharged before the birth of the child. Dr. L. A. Sayre (*Orthopædic Surgery*, second edition, 1883) gives a case upon which he operated, the obstruction being at the anus. He says: "At that time the child was but twenty-four hours old, and being born with an imperforated anus, was at the time of our arrival suffering severely and making great efforts at stool, the abdomen being greatly distended." Dr. Sayre operated with a trocar, inserting it half an inch. He does not treat of the more difficult class of cases in which the anus is perforated, but the rectum occluded. The case he relates serves to show the necessity of an immediate operation, at least in some cases. The first case reported in this paper, as well as some I have seen in medical journals, shows how unfortunate is much delay, though the delay in my first case was likely better borne on account of the premature birth of the child and consequent smaller quantity of intestinal contents. As to the manner of doing this operation there are different suggestions: Erichson advises, concerning the cases where the bowel terminates high up, that the dissection be carried on in the proper line "to a considerable depth." He gives three cases on which he operated which required a depth of "at least one and a half to two inches," but further on says the "perineal section seldom succeeds in saving life," and thinks it a question whether or not Amussat's or Littré's operations for artificial anus are not better. Bryant is more cautious. He says: "When the surgeon has no means of making out the true position of the bowel a cautious incision must be made," and that it "must not be made too high," and "should these means fail, all further attempts must be given up." He quotes Mr. Curling as proving that the perineal exploratory excision, unless undertaken with great care, does more harm than good, but with skill is capable of being followed with success.

If these children are not abandoned to die, then is there but one alternative in the cases difficult to reach from the perineum, and

that artificial anus in the groin or loin. But hear this: "Guersant opened the colon in the groin eleven times in succession, and once in the loin without saving one patient." And again, Holmes tells us that he had not "met with the account of any permanently successful operation since the publication of Rochard's paper." There are, however, instances of success.

Clarke (Manual of Surgery) says, rather dogmatically: "A sharp-pointed curved bistoury should be very carefully introduced upward and backward to the extent of an inch," and that after passing the finger if he fails to reach the gut, "the only remedy is to perform Amussat's operation." Guersant advises the use of a grooved trocar, which being introduced, a knife may be passed along the groove. This must be a great improvement on the cutting plan, provided there is any indication as to where to reach the bowel. However, the size of any trocar, that will without suction discharge meconium and at the same time carry a groove, is too great for an exploring instrument, especially if we bear in mind the anatomical proportions of the young child. Bryant says the blind thrusting forward of a knife or trocar is only to be mentioned with reprehension.

Ashurst, without advising any one course, says in occlusion of rectum there are four plans to choose between, Littré's or Amussat's operation for artificial anus or dissection from perineum, or "puncture with an aspirator over the needle of which a small canula may be afterwards pushed and the passage gradually dilated as recommended by Grimes of Liverpool." I had not seen this last suggestion at the time of the successful operation which I have reported, nor do I see how it could have been literally carried out had I seen it. This suggestion, and that of the grooved trocar of Guersant, are the nearest approaches to that plan which, in the light of the authorities briefly reviewed, and also of the cases with which I have met, would seem to me advisable.

The indications are to have a long fine needle (long enough to go any desired depth), with a canal through it large enough to allow the meconium to pass when acted upon by powerful suction, this needle to be attached to a transparent barrel or tube (glass) through which the smallest quantity of discharge can be recognized.

Second, have a slender grooved director with a short angle at the point through which a small tunnel or eye shall be made large enough to allow the needle to pass through it, or the necessity of

this grooved director might be obviated by having a long and slender blade fixed in a convenient handle, with one inch of cutting surface at the point; on the back of this cutting surface a short hook-like process to project at right angles and made so as to embrace half the circumference of the needle on one side. The needle might well be made to join its screw attachment on one side, so that this director or knife, as might be used, might be made to lie in contact with the needle its entire length, so that the cutting point would be in the direction of the needle.

With these instruments the incision through the sphincter to the point of the coccyx might not be necessary, though it would facilitate the operation at the expense of some hemorrhage and a larger absorbing surface through which septic material might enter the blood. The small needle should be passed upward, and a little backward, along the hollow of the sacrum in the usual direction of the bowel, avoiding the bladder in front and the blood-vessels behind and at the side.

Suction force should be put on this needle after it is introduced and it carefully pushed on to a considerable depth. If certain that the right direction is maintained, it might be carried to the brim of the pelvis, or the needle might be withdrawn and the direction changed, it being so small as not to materially injure the tissues; as soon as meconium is withdrawn we know we have entered the bowel; then, using the needle as a guide, we may pass the slender knife with the hooked process on the back near the point along the needle, this little hook embracing the needle compelling us to keep close to it; thus an opening may be made through which a director or other instrument may be passed before the needle is withdrawn. If it is thought best to use the director with the eye-hole above described, the needle must be passed through that before it is introduced, the director then pushed down to the obstruction and the knife guided along it, making a narrow channel along the needle in advance of the director, which, when completely in the bowel, is allowed to remain and the needle withdrawn. The channel may then be enlarged with Civiale's bistouri caché, or some one of the dilating urethrotomes, as Otis', until a suitable tube can be introduced. I think the stitching down of the bowel to the lower margin of the wound, as is advisable, if possible, will generally be found impracticable in cases of much gravity. I have intended to have instruments made

especially for these cases (they would also be useful in other cases), but as yet I am not aware that any such have been made. A small needle of an ordinary aspirator would do if a piece of glass tube was attached close to the needle, so that a small quantity of discharge could be seen; an ordinary grooved director might be bent just at the point and a hole drilled through so that it could go over the needle; and if these means were not at hand, even the hypodermic syringe would be of the utmost importance, especially when, as in my last case, you had cut until you did not know whether to make any further attempt or to abandon the child to die, or, what is not much better, make an artificial anus on the plan of Amussat in the loin or of Littré in the groin.

The point of obstruction in the case reported now presents only a narrow ring near the anal orifice. This is not hard to explain: not only will the same distance be relatively less in the greater proportions of a larger child, but the lower segment of the rectum being attached to a comparatively fixed point, the longitudinal contraction of the cicatricial tissue will tend to draw it in that direction—also the natural prolongation of the intestinal canal extends downward.



REPORT OF THE CHAIRMAN OF THE SECTION ON OBSTETRICS AND GYNÆCOLOGY.

By SIMMONS B. JONES, M.D., of Charlotte, N. C.

Read before the Medical Society of North Carolina, at Raleigh,
N. C., May 21, 1884.



MR. PRESIDENT AND GENTLEMEN :—The past year has been almost barren, so far as regards new operations and new instruments. The operations of Lawson Tait, Freund, Porro Muller, etc., have become matters for text-books, as also Tarnier's axis-traction forceps, hot water as a uterine hæmostatic, expression of the placenta and immediate closure of lacerations of the perineum. But each year brings experience of the older methods, and the facts which make improvement possible are developed and stand up for the coming of a future

genius. I shall not attempt to follow the example of previous reporters on this subject, for they have so completely covered the ground as to make a general report useless. I ask pardon for occupying most of my paper with the subject so important to the Gynæcologist and Obstetrician.

ANTISEPTICS AND THE GERM THEORY OF DISEASE.

This subject has caused more anxious thought and more keen debate during the past year than ever before, and as Lawson Tait, of England, and other distinguished surgeons of Europe and America have come out in open opposition to the whole theory and practice, it becomes a matter of the greatest interest to know,

1st. What evidence we have of the truth of the germ theory.

2d. The evidence, if any, of the good accomplished by the antiseptic treatment, and

3rd. The improvement in such antiseptic measures made during the past year. The researches of Pasteur, Tyndall and their co-laborers, have settled the scientific truth that no decomposition, or fermenting change, will take place in organic matter without the presence of living organisms. "These are the sole agents of corruption in nature." These living organisms are not of spontaneous origin, but are developed from spores that float in the air and abound in every pool, stream and river. They are vegetable in character, and the changes inaugurated by their vital activity determine decomposition, putrefaction and fermentation in organic matter. The putrefaction of the organic matter in all bad-smelling wounds only takes place from their growth and development, and the poisonous properties of such matter depends on the products of this fermentation. Pasteur, Koch, Ogston and many other trustworthy observers, have made investigations of microscopic organisms. Their life-history and their differences and capability of producing disease. In regard to their powers of producing disease, it has been shown that blood or pus taken from certain diseased animals will produce like disease when inoculated into a healthy animal, and that the blood of the diseased animal teemed with a certain definite organism. When filtered through clay cylinders, by which the micro-organisms were removed, it ceased to cause disease, but acted as a chemical poison. To eliminate all doubt as to the part played by bacteria and micrococci in the production of erysipelas,

Fehleisen, of Berlin, cultivated the chain micrococci by planting small pieces of the excised erysipelatous skin in gelatine. He thus inaugurated a series of artificial cultivations, by which films, consisting entirely of this micrococcus were obtained. With these films seven men were inoculated, and six showed, after a period of incubation ranging from fifteen to sixty hours, typical erysipelas, setting in with rigors, high temperature and running the characteristic course.

The chemicals produced during putrefaction have been investigated during the past year. They are called ptomaines, and upon them depends largely the deadly or benign nature of different varieties of micro-organism. For the ptomaines produced by some fermentations are harmless, and by others malignant.

CULTURE EXPERIMENTS.

Many micro-organisms have been artificially cultivated from generation to generation, and something learned in this manner about their growth and reproduction. In this way it has been shown that these beings increase, in a proper soil, in a perfectly marvelous manner. A pound or a gallon of harmless fluid containing organic matter in solution, can be rendered deadly by the addition of one drop of matter charged with septic germs, provided only a short time under proper conditions of temperature be allowed for the growth and reproduction of germs; and so a drop from this gallon will infect another portion of harmless matter. These culture experiments have been carried on through twenty-five generations, and the original disease was produced in all of its unmistakable virulence. The theory of living germs accounts satisfactorily for the natural history of diseases having a period of incubation. For a chemical poison would produce immediate effect upon absorption, and the gravity would be proportionate to the dose, but in a disease caused by germs, there would necessarily be a period required for their growth and reproduction. In many of these diseases the specific germs have been found, and the period of incubation, progress and end of the disease shown to coincide with the birth, reproduction, life and death of the bacillus. Even Mr. Lawson Tait and others who claim disbelief in the noxious power of germs, show a much more unreasonable dread of a poison more subtle than any ever extracted by the chemist. Mr. Tait uses every precaution that

cleanliness can suggest, and the whole conduct of the disbelievers in the germ theory of disease shows a belief in some poison that can lurk under the finger-nail or find a resting-place on a polished instrument. This invisible poison must be able to reproduce itself, must, in fact, be living, as we know of no chemical poison that is dangerous under such circumstances. No surgeon would be afraid to touch a wound because he had handled arsenic or strychnine, provided he had carefully washed his hands, and yet imagine the consternation that would be produced in Mr. Lawson Tait's operating room, if he were to find that one of his assistants or visitors had come from a post mortem or the room of a patient suffering with diphtheria, erysipelas or any disease now said to be septic? And yet the only thing that makes even the matter or the blood of these patients dangerous, is the presence of condemned bacteria? Finally, when we reflect that all men who have studied infectious diseases, in all ages, have recognized a mysterious poison that could not be seen, or weighed, or measured; when we see all the attributes of this poison fully explained in every particular by the germ theory; when we remember that almost all diseases of plants are of parasitic origin, and then add the positive evidence adduced in the preceding pages, I think it must be admitted that the theory is most probably true. If, then, it can be shown that the treatment naturally deduced from this theory has met with success, if the septic diseases have been prevented, or cured by means that could only act by the destruction of the lower forms of vegetable life, then I think the theory must be acknowledged to be true.

Is there any evidence that septic diseases have been prevented or cured by treatment directed to the destruction of germs?

I think this question must be answered in the affirmative, and in proof of my position I quote from Pitcher on wounds: "During the eighteen years which have elapsed since Joseph Lister began the use of carbolic acid as a germicide in the treatment of compound fractures in the Glasgow infirmary, the theory has been tested upon a vast scale by many methods and by a multitude of observers. * * * Out of thirty-five amputations performed by Mr. Lister just prior to the use of carbolic acid, sixteen died, nearly all from infectious diseases; out of forty amputations performed in the three years subsequent to the treatment, only three died of pyæmia, and one of these was affected when the operation was

performed. In 1877 Professor Volkmann reported that not a single case of pyæmia or septicæmia had occurred among his patients during three years, notwithstanding the deaths from this cause had been so numerous prior to the adoption of antiseptic precautions that the entire closing of the hospital seemed necessary.

Schede gives comparative tables of 321 uncomplicated amputations performed aseptically, and 377 treated by old methods—the mortality in the aseptic cases was, in round numbers, 4 per cent., and by the old method 29 per cent. The only change in all this was to the antiseptic method of treatment, and yet some have urged the point that surgeons are now more expert. Is there any reason in the idea that we can now perform a cutting operation better than Velpeau or other skilful surgeons of forty years ago? And even admitting that the modern surgeon is more expert, we can hardly think that Mr. Lister or Mr. Billroth Volkmann, and a hundred other surgeons could all of a sudden have become more expert than they were the previous weeks or months? But the objectors further say that the good results were brought about by increased cleanliness? This, I believe, is to a large extent true, but cleanliness is simply an antiseptic precaution, for neither blood nor dirt of any kind is poison unless it contains germs of disease or the ptomaines resulting from bacterial fermentation. Mr. Lister's method of treatment is now too well known to require mention, except to say that the spray has been abandoned as troublesome, useless, and some assert, even dangerous, as it drives the floating particles of dirt deep into the wound.

What are the most approved methods of guarding wounds from septic infection and rendering septic wounds aseptic?

The easiest, the most important and the cheapest of all antiseptic precautions is cleanliness. Cleanliness, to be successful, must mean the removal of all pabulum from a wound that might serve to nourish bacteria and to prevent the introduction into the wound of any foreign matter. It means a clean dressing, clean air and a clean surgeon. The great antiseptic power of cleanliness is shown in Mr. Lawson Tait's success. Not less necessary in many cases, especially in hospitals and localities where the conditions necessary for the production of disease germs abound, is the use of proper antiseptics in the true sense of the word. I refer to the employment of substances as applications to wound surfaces, which destroy or

restrain the growth of septic germs. Of these substances many have been proposed, but I shall mention only three.

CARBOLIC ACID.

This substance was first introduced to the profession by Lemaire, of France, in 1863, but it is chiefly in connection with Mr. Lister's now famous method that it was made known to the world in 1866. It is quite reliable in comparatively weak solutions. One to twenty may be depended on with certainty to destroy all micro-organisms, except such resistant spores as those of anthrax. It will restrain the growth and development of the micro-coccus of pus in the strength of one to five hundred. It is readily diffusible, will mix readily with glycerine and then with water. It is not an escharotic in the strength required, and all parts of a wound may be freely bathed with it.

DISADVANTAGES.

It excites some local irritation, it forms compounds with albumen, so that its addition in larger quantities and in greater strength is necessary to secure complete disinfection of wounds. The irritation which the ordinary solutions produce determines increased capillary oozing and an excessive and prolonged serous flow from wounded surfaces. Eczema and erythema of the skin are not an infrequent effect of carbolic dressings. It benumbs the skin and is followed by branny exfoliation of the superficial layers of epidermis. This makes it very disagreeable to the surgeon. Its volatility lessens its usefulness as an agent to secure permanent antiseptics. Its toxic qualities are a very serious objection. Many fatal cases of poisoning by absorption of carbolic acid when used as an antiseptic application have been recorded. The importance of these disadvantages are so great as to narrow the use of this agent to employment only as an antiseptic bath for instruments.

CORROSIVE SUBLIMATE.

This is beyond all comparison the most available antiseptic. It is much more powerful than any other, killing the most resisting spores in a few minutes in the extreme dilution of 1 part in 1,000. It destroys the ordinary germs in the strength of 1 in 20,000, and restrains germ development in the dilution in 35,000. The subli-

mate solution is free from odor and does not irritate the wound. By its use the wound secretions decrease, and wounds previously offensive become speedily sweet. It cannot be employed for the disinfection of instruments on account of its corrosive action on the metal of which they are made.

IODOFORM.

The credit of having introduced this drug as an antiseptic dressing is due to Professor Van Mosetig Morshof, of Vienna, in 1880. This dry powder dressing offers many advantages. It restrains wound secretion, it destroys the vitality of whatever germs are present in the wound itself, it exercises an anesthetic effect upon the surfaces to which it is applied. Iodoform cannot be used for disinfecting instruments, sponges and the hands of the surgeon on account of its slight solubility. It is less absolute in its power to protect against erysipelas, its odor is pervasive and lasting and very disagreeable. When used very freely it is absorbed and causes rapid and feeble heart action, coma and paralysis of the organs of respiration. Autopsies have demonstrated in such cases the lesions of fatty degeneration of heart, liver and kidney, and also meningitis. But the most remarkable manifestations of poisoning are the perversions of cerebral action, taking the form of mental derangement. In the present state of our knowledge iodoform should be used with much caution, not more than forty-five grains should ever be sprinkled upon a fresh wound. I think the following general rules will give an idea of the best methods of guarding against septic infection in gynæcology.

1st. Use all the rules of most perfect cleanliness of everything about the patient.

2nd. For the purpose of washing wounds, hands and dressings, use the bichloride of mercury.

3rd. For instruments, carbolic acid, and whenever a dry powder is considered best, iodoform.

ANTISEPTICS IN OBSTETRICS.

At the meeting of the New York Academy of Medicine, in December, 1883, Dr. T. G. Thomas read a paper on the prevention and treatment of puerperal fever. He announced puerperal fever to be a disease caused by specific germs, and gives the following rules for preventing the disease :

1. In all midwifery cases, whether in hospitals or private practice, the floor and the ceiling of the room in which the woman is to be confined should be thoroughly washed with a ten-per-cent. solution of carbolic acid or a bichloride solution, one to one thousand. The bedstead and the mattress should be sponged with the same solution. All curtains and upholstering should be dispensed with.

2. The nurses and physician should take care that all their clothing is free from exposure to the effluvia of septic infection, such as typhus, erysipelas, septicæmia, scarlet fever, etc., and if there has been any exposure in this direction, all the clothing should be changed and the body thoroughly sponged with a saturated solution of boracic acid.

3. As labor sets in, the nurse should thoroughly wash her hands with soap and water, remove the dirt from under the nails and administer an antiseptic vaginal injection, repeat it every four hours during labor, and keep a napkin wrung out of the same antiseptic solution over the genitals until the birth of the child.

4. Both doctor and nurse should wash their hands thoroughly with soap and water, and scrape the nails, and afterwards soak their hands for several minutes in a solution of bichloride of mercury, one to one thousand.

5. The third stage of labor should be efficiently produced, all portions of placenta should be removed and ergot administered in moderate doses three times a day, to be kept up for at least one week, to secure complete expulsion of the clots and closure of the uterine vessels.

6. The doctor should take nothing for granted, but at the conclusion of labor should carefully examine the vulva of the patient. If there is any rupture of the perineum, it should be closed at once by suture, and, if slight lacerations are found, they should be dried thoroughly with a cloth, and equal parts of a saturated solution of carbolic acid and per-sulphate of iron applied, and again the surface dried with a cloth and painted over with gutta-percha collodion.

7. Within six or eight hours after the termination of labor, syringe out the vagina with an antiseptic solution, and introduce a suppository of cocoa butter, containing from three to five grains of iodoform.

8. The vaginal injections should be repeated every eight hours; but in all cases of difficult labor, and in those in which instruments have been employed, they should be administered twice as often, and kept

up at least for ten days. The nurse must wash and disinfect her hands before every approach to the genital tract of the woman.

9. Employ a new gum-elastic catheter, which has been thoroughly immersed in an antiseptic fluid each time the bladder is evacuated, rather than trust the nurse to cleanse an old silver catheter.

10. The physician must inform himself by personal observation as to the competency of the nurse with regard to the use of the catheter, the administration of the vaginal injections and the introduction of the suppositories.

In our practice in North Carolina, where puerperal fever and other septic diseases are rare, the strict method of Dr. Thomas is not indicated. But it is our duty, from the information now before us, to use all of the simpler methods of antiseptic practice, such as disinfecting hands and instruments, and withal, perfect cleanliness. Also, to use the vaginal injection of a solution of bichloride of mercury whenever there is any foul odor about the lochia.

EMMET'S OPERATION FOR THE TREATMENT OF CERTAIN DISEASES OF THE FEMALE URETHRA.

In an address read before the New York Gynæcological Society Dr. Emmet gives a minute description of an operation designed for the exploration of the female urethra, and also for the relief of certain conditions that have heretofore given the surgeon much trouble. The design of the operation is to make a button-hole opening into the urethra, leaving the meatus intact, and it is performed by introducing a sound and cutting down on it at a point midway between the meatus and neck of the bladder. This opening is then enlarged by scissors in the median line, backward toward the bladder, and forward toward the meatus, taking care not to divide either the meatus or neck of the bladder. The incision along the vaginal surface should be made nearly a third larger than the one through the urethral mucous membrane, and it is important that the chief difference should be at the end of the line over the bladder, as we thus gain with the leveled angles a great advantage for examining the urethral tract, and also free the lower angle of incision at the neck of the bladder, so that if necessary the finger or a small speculum can be passed into the vesical cavity. So long as the vaginal surface is intact the parts about the neck of the bladder remain bound down by the direct connection of these tissues

with the sub-pubic ligament and pelvic fascia. This operation is advised in cases of very stubborn inflammation of the urethra, pedunculated, vascular and neuromatoid growths, prolapse of mucous and sub-mucous tissues, fissures at the neck of the bladder, urethracele and laceration of the urethra from dilatation.

RUPTURE OF THE PERINEUM.

Dr. Emmet modifies his former views on this subject in the November number of the *Journal of Obstetrics*. He discards the idea of a perineal body, and says that the true way of repairing the injury is to bring together a portion of the posterior vaginal walls, and that the support is afforded, not by the triangular perineal body, but by the pelvic fascia.

Dr. Carter, in the *Medical News* of July, suggests a method for prevention of rupture of the perineum by tiring out the muscles, especially the sphincter and levator ani. This is accomplished by introducing two fingers into the vagina and one into the rectum, and making steady traction downward and forward. This is not altogether a new procedure, but I do not recollect to have seen it mentioned in any former report.

EXPLORATORY INCISION.

The progress of abdominal surgery during the past few years has removed to a great extent the former dread of opening the cavity of the peritoneum. Lawson Tait, in his book, "Diseases of the Ovaries," boldly advises that whenever a grave trouble is suspected in the abdominal cavity, it is the duty of the surgeon to open the cavity and explore the contents; and if the trouble is found not curable, to close the opening. This has been done many times, and I have not seen a single death reported.

CREDÉ'S METHOD.

The value of this procedure has been questioned of late, and Fehling has made a comparative trial of this and the expectant plan. He used Credé's method in ninety cases and the expectant plan in ninety-five. By Credé's method the loss of blood averaged $5\frac{1}{2}$ ounces, and the time taken for the delivery was $7\frac{1}{2}$ minutes. The membranes did

not come away entirely in five cases. By the expectant plan the loss of blood was 6 7-10 ounces, the time 13 1-10 minutes, and a portion of the membranes was retained in four cases, showing no great difference in results of the delivery by either method. Runge, Dohrn and Schultze do not approve of expression. Ahlfeld believes there is greater danger of secondary hemorrhage and of leaving portions of the membranes in the cavity of the uterus to become a nidus of septic disease. Heger and Freund prefer absolute expectancy; a majority, however, prefer the speedy method.

MAMMARY ABSCESS.

The German and American authorities now consider fissures and erosions of nipple the most frequent cause of mammary abscess. The wide-mouth breast-pump and rough friction are also instrumental in producing this troublesome complication. As the suppuration is caused by germs introduced into the fissures and erosions, the obvious prophylactic measure is to protect such little wounds from septic infection, and to promote their healing as quickly as possible. Dr. Wylie, of New York, recommends applying a blister over the breast to abort suppuration. Calx sulphurata has been strongly recommended for the prevention of abscesses in other localities, and I have thought I obtained benefit from its use in the only two cases I have seen in the past year. Iodide of potassium, combined with quinine, is now recommended as the most efficient prescription for suppressing the secretion of milk.

ABSORPTION OF SUBSTANCES BY THE UTERUS.

In a report from the *Obstetric Clinic* at Giessen, in 1883, Ahlfeld gives the details of some experiments made by him on this subject. He arrives at the positive result that in the case of a contracted uterus the absorption is very much less than when the organ is relaxed, and that the absorptive power is greatest from the third to the sixth day. The experiments were made with dilute solutions of salicylic acid, the absorption being proved by the demonstration of the drug in the urine. This shows that care should be taken, especially from the second to the seventh day, that there is no septic matter to be absorbed.

MASTURBATION AS A FACTOR IN THE PRODUCTION OF GYNIC DISEASES.

In an article on this subject, June 1883, Dr. J. Milne Chapman draws the following conclusions :

1. Masturbation exists to a considerable extent in women.
2. That it is accomplished, as a rule, by manipulation of the external parts.
3. That its accomplishment by the introduction of foreign bodies into the vagina is rare.
4. That decided and constant changes of the external organs of generation result from its long-continued practice.
5. That the following external changes and symptoms are generally sufficient to establish a diagnosis. An increased appearance of size of the external organs, due partly to their being separated and spread out, and partly to a real increase in size of the clitoris with its prepuce, and of the labia minora. The clitoris is frequently found situated higher up or further away from the vaginal outlet than usual. There is also an alteration in color, usually a blueish mottled appearance of the labia minora, which are at the same time dry and rough. There may be extreme redness from recent irritation, a relaxed and patulous condition of the entrance of the vagina. Sometimes the labia minora are two or three inches in length. An abnormal sensitiveness will be met with on touching the external parts, and possibly a greater degree of moisture than usual. The clitoris will usually be found erect, and on touching it the patient will almost invariably show her want of self-control. On passing the finger into the vagina, there will often be felt a spasmodic contraction of the lower inch and a half of the canal. The cervix is abnormally soft, and the os may be gaping. I have described the symptoms so minutely because I believe many cases of dysmenorrhœa; leucorrhœa and ovarian neuralgia that baffle treatment are caused by this baneful habit. Speaking of the orgasm in the female, Dr. S. E. McCully, of Ontario, says: "There is an erection of the clitoris, and so long as the orgasm continues, its muscles contract as regularly as do those of the male in the act of emission of semen. At the same time the whole machinery of the muscles of the uterus is put in motion. The uterus sways from side to side, its whole body rises and falls from one-eighth to one-quarter of an inch, and

the annular muscles of the cervix can be distinctly felt contracting. Before an orgasm is induced every particle of mucus may be washed from the vagina, a rubber cap may be placed over the cervix, and when the act is over, if the rubber be removed, it will be found to contain from a half to a drachm of transparent semi-fluid substance, resembling the white of an egg." "If," says the same writer, "the act of masturbation brings into play so many forces, and if the orgasm is being constantly induced, it can be readily understood how it happens that soon a dangerous train of symptoms is set up, that an unsuspecting physician may find it very difficult to control."

HYDRASTIS CANADENSIS.

Schultze has made some experiments with this drug in the treatment of uterine hemorrhage. He used the fluid extract, twenty drops three times a day, and says that it acts on the female genital apparatus as a whole, and not alone on the mucous membrane. It is often effective in cases where ergot has failed. Favorable results were obtained mainly in metrorrhagias due to myomata, in hemorrhages in the puerperium, in menorrhagias of young persons from fifteen to eighteen years of age. Also in those cases of endoarteritis in which curetting had failed. In most cases he commenced the use of the drug one week before the onset of the menses, and when the catamenia recurred with undue frequency, even longer previous to the normal date of their appearance. In several cases the flow became not only less profuse and shorter in duration, but several times it failed to set in altogether. In cases of myomata the hemorrhage disappeared often for months.

In concluding this paper, I again ask pardon of the Society for touching on so few of the many interesting subjects now being talked and written about in every civilized country. I also wish to say that any information for which I have not given due credit to authors was obtained from Pilcher on wounds, Griddle on the germ theory of disease, and recent numbers of the *Journal of Obstetrics*.

SELECTED PAPERS.

FRACTURE OF THE LOWER END OF THE RADIUS.

By PROF. R. J. LEVIs, M.D., Philadelphia.

[Reported from the Proceedings of the Philadelphia Academy of Surgery.]

The ordinary fractures of the lower end of the radius, produced by falls on the extended palm of the hand, are situated at from one-quarter to three-quarters of an inch above the articular surface, and are transverse in direction. The characteristic deformity of the fracture, as originally described by Colles, is correct, but he erred in locating it at an inch and a half above the carpal extremity of the bone.

The theory of the fracture as described by Barton, "a quite small fragment broken from the end of the radius on its dorsal side," has not been verified by clinical experience or by pathological observation, and is not in accordance with the true mechanism of the production of the fracture.

The force which produces the fracture is, for the most part, transverse to the long axis of the bone, and tends only to produce transverse fracture. Violent over-extension of the hand is the important factor in its production, and the bone breaks immediately above its long ligamentous connection with the wrist and hand. Force transmitted through the anterior carpal ligament is the immediate cause of the fracture.

Impaction, to a small extent, may occur by the posterior edge of the upper fragment being driven into the cancellated structure of the lower fragment, but it is not an important complication, and should not prevent coöptation.

Comminution is usually vertical splitting, and is caused by the same mechanical action as that which tends to produce impaction.

The displacement of the lower fragment backward and upward can always be overcome by strong longitudinal traction associated with forced flexion; and, in uncomplicated cases, the fragments,

when completely reduced will remain in apposition without any retentive apparatus.

When comminution by vertical splitting exists, and the fracture has been produced by great force, rupturing the surrounding dense structures, apposition may usually be maintained by keeping the wrist in a state of flexion, with the aid, sometimes, of the pressure of the dorsal pad.

The unfortunate sequences of this fracture, as generally treated, are due to *imperfect primary reduction of the displacement and the want of proper retention in apposition*. The usual long-continued impairment of function of the wrist and hand, and the painfulness which generally follows, are not due, as asserted by most authorities, to inflammation in the sheaths of the tendons, but *simply to pressure and irritation caused by the unreduced fragments*. That such impairment of function and suffering result from the ordinary incorrect treatment of the fracture by surgeons generally, nearly all surgical authorities attest.

Many years ago, whilst endeavoring to investigate the cause of the usual bad sequences of the fracture under consideration, I recognized its almost uniform position and direction, and concluded that its transverse direction, at that, the thickest part of the bone, could not be produced by longitudinal force, as had generally been taught. Examination of a number of cases of chronic deformity following the fracture, and of many museum specimens, demonstrated the fact that the mechanism of the fracture had not in the treatment of those cases been understood, and that the fragments had never been brought to proper apposition, and thus deformity, with its attendants of more or less suffering and disability, had continued through the lives of the patients.

I do not deny that fracture of the lower end of the radius may be produced by varied, direct and indirect forces, and consequently show as much variety in its mechanism. But the form of fracture which is of most frequent occurrence, presenting the familiar characteristics, and which in its results, as ordinarily treated, is truly the opprobrium of the surgery of fractures, is a simple transverse fracture, very near to the carpal end of the bone, can readily be placed in apposition, and should not be followed by deformity or permanent disability. I have clinically taught and practised on these principles since the year 1861, and have asserted them in an

address before the Medical Society of the State of Pennsylvania in 1874, and again in a paper before the same body in 1879.

The accompanying cut, Fig. 1, is from a cast taken from a recent case by Dr. Harte, one of the resident surgeons of the Pennsylvania Hospital, which well shows the characteristic deformity of the usual transverse fracture of the lower end.

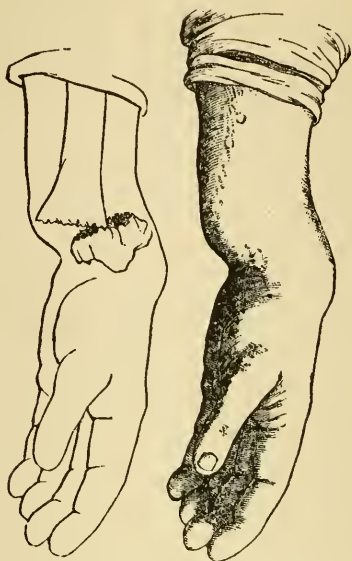
The schematic outlines, Fig. 2, represent the relative position of the fragments.

The usual errors in the treatment of this fracture are in not recognizing the position and direction and the peculiar displacement of the lower fragment, and in not producing a correct apposition of the fragments. There is also the customary error of endeavoring to treat a fracture of a curved portion of bone by a straight surface of splint, which tends, after complete reduction, to again displace the lower fragment backwards. A pad fitted to the anterior radial curvature may be placed on a straight splint, but it is liable to slip out of position, and its action to be the reverse of what it is intended to accomplish. The moulded splint has the merit of following the curve of the anterior surface of the lower end of the radius, and the imbedding of the wrist and hand in corresponding portion of the splint secures the curve in its proper position with reference to the fracture.

The fixation of the wrist and hand in a state of slight flexion obviates the tendency of the lower fragment to upward and backward displacement. The moulded splint is of flexible metal, so as to be comfortable to any fleshy or attenuated forearm. It is supplied by all the surgical instrument makers.—*Leonard's Illustrated Medical Journal*.

FIG. 2.

FIG. 1.



ON THE USE OF THE OBSTETRICAL FORCEPS AS A SPECULUM AND PROTECTOR TO THE VAGINA IN OPERATIONS UPON THE FŒTUS IN UTERO.

By JOSEPH PRICE, M.D., AND G. G. FAUGHT, M.D., of Philadelphia, Pennsylvania.

While fully subscribing to Baudelocque's dictum, that "the forceps has been more injurious than useful to woman," we are persuaded that it is the abuse, rather than the intelligent use of them, that has made this saying possible. We might have some hesitation in adding to the already seemingly replete literature of the obstetrical forceps—in which every obstetrician, and many not laying claim to such a title, has been in print with instructions how, when and where to use them; we might be deterred by the seeming self-sufficiency of the mass of the profession, as shown in the societies by the levity with which questions relating to their use are treated, from claiming for them a use in addition to that of tractors and compressors; were it not that the records of gynæcology scored over and over again with cases the sad history of which is the result of their reckless and unintelligent use.

The late Dr. John Parry gives the mortality of craniotomy as $37\frac{1}{2}$ per cent.; according to Dr. Agnew (*Surgery*, vol. ii. page 821), "a fatality quite as great as that resulting from Cæsarean section." As a careful perusal of the writings of Schröder, Tait and others, shows how often this operation is followed by genital fistulæ, we have good reason to believe that lacerations and contusions of the soft parts are no mean factors in accounting for this heavy mortality.

The design of the present article is to call attention to the use of the forceps in craniotomy as a protection to the maternal soft parts, and by retracting the vagina (and, if needful, the cervix) enable the operator to use craniotomy instruments safely and expeditiously. It seems to have been lost sight of by the profession that the primal use of specula were for exactly this purpose; Abulcasis* so using them as early as the twelfth century.

In using the forceps after the manner referred to in the title, when the destruction of the fœtus is clearly and fully indicated, a

* Quoted by Schröder as Abulcasein.

pair of forceps, as wide in the blades as the diameters of the pelvis will permit, are applied in the ordinary manner, and used for fixation and compression of the head, while the vault is perforated and broken or folded up. If preferred by the operator, the blades may be separated to their respective sides of the pelvis, and held by assistants, recrossing and locking them when necessary to make traction and compression.

Writers on obstetrics report cases* in which the head was perforated, after ineffectual tractions had been made with the forceps, without removing the instrument, and the delivery subsequently accomplished safely. The use of the forceps in all these cases was, however, accidental—that is, the operator perforated the head, after he had ineffectually used the forceps as tractors, allowing them to remain on merely to save time and trouble by their subsequent reapplication. Dr. Rigby, of England, and M. Cazeaux, in France, recommend the forceps as extractors in embryotomy. This article claims the great value of the forceps, when craniotomy is designed, applied *intentionally, prior to perforation*, with the object of affording much greater facility to the operator in his manipulations, and of protecting, almost absolutely, the maternal soft parts from the injuries so common in the hands of even skilful operators, from slipping of instruments, etc. A prominent New York practitioner, who boasts “3,000 cases and a year at Vienna,” records the slipping of a cephalotribe *eight* times, the operation being finally completed with a blunt hook. Cases are known in which the cervix has been entirely cut away, and in which, in trephining the base of the child’s skull, the mother’s sacrum has been sawn into. Such injuries would certainly be done away with, if the operator has the vaginal tissues widely dilated by means of the forceps.

To represent the utility of the forceps under such circumstances, we cite the following cases :

CASE I.—M. B., æt. 21; primipara. In this patient the pelvis was of a masculine type, the child’s head unusually ossified, and its dimensions large, absolutely and relatively. When Dr. Price saw her she had been in labor for a long, but indefinite time—as the pregnancy was illegitimate, she had attempted to conceal the fact that she was in labor—and the child was dead. The head was presenting at the vulvar orifice, which was very much swollen, and the

* Hodge, Syst. of Obstet. pages 252, 272, etc.

woman's vital forces failing. The hand and arm were returned to the uterine cavity, and the head brought into position. As there was no expulsive effort whatever, the forceps were applied; traction, however, failing to engage the head, considerations involving the safety of the mother demanded prompt removal of the child. Without removing the forceps, craniotomy was quickly performed, after the method described. The mother's soft parts were entirely uninjured, and the woman made a prompt and satisfactory recovery. It seems scarcely necessary to state that version was not performed or attempted in this case, because it was believed that the safety of the mother would be greatly compromised by turning and dragging through contracted and inflamed tissues a large, *still* child.

CASE II.—Mrs. D., æt. 28; second labor. The first labor, two years previously, had been a protracted forceps delivery. The present labor was seen in consultation; it was a summit presentation, and various forceps had been already unsuccessfully applied. A further attempt by Dr. Price was equally unsuccessful in engaging the head, its diameters being at least an inch greater than those of the pelvic outlet. The forceps being *in situ*, a large male foetus was removed after perforating and crushing the head. The patient's recovery was all that could be desired, and she has since borne a normal child, the labor being easy.

CASE III.—A. G., æt. 22; primipara. Extreme angular curvature of the spine, and the pelvis was narrowed in the conjugate diameter to nearly two and a half inches. The head presented; the occiput was situated posteriorly and unengaged. Dr. Faught applied the forceps (Davis's), but was unable to move the head. Drs. Hampton and Price were called in consultation, and craniotomy was decided upon. At the suggestion of Dr. Price, the forceps (Hodge's) were first applied, the blades being separated to their respective sides of the pelves, and used as a speculum during the subsequent operative procedure. Except for a slight tear of the perineum made during the delivery of the shoulders, this was happily accomplished. The child was a male, and above the average size. The patient's recovery was uninterrupted and satisfactory.—*Medical News*.

REVIEWS AND BOOK NOTICES.

DRUGS AND MEDICINES OF NORTH AMERICA: A Quarterly Devoted to the Historical and Scientific Discussion of the Botany and Pharmacy, Chemistry and Therapeutics of the Medicinal Plants of North America. Their Constituent Products and Sophistications. J. U. Lloyd & C. G. Lloyd. No. 2.

The title page of this serial indicates its character, although nothing but an examination would indicate the author's method of treatment of the subject. Each number consists of thirty-two pages of text, interspersed with abundant wood cuts and uncolored plates. Plants are taken up in their natural order, beginning with the Ranunculaceæ, describing specifically each plant having real or reputed medicinal value. The number before us concludes a description of *Anemone patens*, giving a very lengthy list of references to the plant, covering authorities for three-quarters of a century, for which the authors acknowledge their indebtedness to Mr. Sereno Watson's "Bibliographical Index," a work, by the way, which is a monument of botanical research.

Anemone Hepatica, Lawson, and *H. acutiloba*, Linné, are exhaustively treated. The former is the same as given in Curtis' Catalogue as *Hepatica triloba*, Chaix, and known by the common name of Liverwort. The author's endeavor to clear up the confusion which naturally arises from the employment of the name liverwort to two very different plants, the one above named, and a cryptogamic plant, known in botany as *Marchantia*. Singularly enough the plant which is here figured and described so fully, is inert as a medicine, and seems only to live upon the reputation of its namesake. Of this useless herb we are told that in the year 1883 there was an aggregate of 450,000 pounds imported and gathered for use in this country. The authors have given this plant a very distinguished burial, and all we can suggest is that it is a pity to leave out a single name by which it might be identified hereafter, and we quote from "The names of herbes in Greke, Latin, English, Duch & Frenche & Gathered by William Turner" A. D. 1548, as follows: "Trinitaria or Trinitatis herba, is of two sortes. The one hath leaves lyke a Clauer, and it groweth in the Alpes, and other

highe mountaynes. It may be called in English *mount-trifoly*. The other kinde is called in English two faces in a hood or panes. Thys is like Unto a Violet in the flowers, and it groweth oft among the corne."

We would point out one slight error in connection with the distribution of *Hepatica*. It is stated to be "in all sections" of this State, whereas it is not seen east of the rocky hills of the middle district.

Ranunculus bulbosus (common names Crow-foot, Butter Cup, etc.) is figured in a full size engraving. The description of this and others of the genus covers ten pages, with many smaller wood-cuts. The investigation of *anemonin*, as here described, shows the ability of the authors as chemists, and makes known a heretofore little known active principle of the various species of *Ranunculaceæ*.

To those gentlemen who are taking fresh interest in medical botany we heartily commend this work, and an early subscription thereto, to enable them with little effort to master each part as it appears. The work is issued at the very small sum of *One Dollar* a year, and is beautifully printed and illustrated.

McALPINE'S BOTANICAL ATLAS.

Botany without illustrations is the driest and most unsatisfactory of the natural sciences. Many persons would become ardent students of botany if they could be shown the plants, see their parts analyzed, and get an insight into their properties and functions. The analysis of one plant thoroughly done serves as a key to many others. A whole genus, and sometimes a natural order may be understood by one representative plant. Prof. McAlpine has adopted in the volumes before us the most lucid method except that of demonstrating the living plant.

There are two volumes. One describing the Phanerogams, the other the Cryptogams. "The Phanerogams are represented in all their leading divisions, and the various reproductive processes are fully illustrated. Typical members are chosen from the principal Natural Orders, and the mode of examination pointed out. The flower and its various parts passing into fruit and seed are mainly considered, and this forms the best introduction to a course of practical botany, since the eye and hand trained to dissect and distinguish these comparatively conspicuous structures, can then more

easily pass to the study of the root, shoot and leaf and their various modifications.

The illustrations begin with the lowest class of seed-bearing plants, the Cycadeæ, then the Coniferae, and so on up to those having the highest floral organization represented by the daisy and the dandelion. The drawing and coloring are very superior, and the color in microscopical dissections is retained. We can hardly conceive anything more graphically done than these illustrations.

The cryptogamic plants begin with the minutest, including the palmella, yeast and bacteria. A full (folio) page drawing is devoted to *Bacterium anthracis*, as occurring in the blood and spleen of a diseased animal. We know of no introduction to cryptogamic botany half so lucid nor half so enticing as this. The sea-weeds, and fungi, and mosses, and lichens, and stoneworts, and liverworts and the hundred humble flowerless plants are here made so plain, that one can hardly resist the temptation to unlock their mysteries by the key the author has given us.

To our readers who have from time to time addressed notes of enquiry about what books would be most helpful in botanical study without a teacher, we recommend this. There is but one other which has come to our knowledge which may be superior because of the immense number of illustrations, and that is La Maout and De Caisne's; but with these and Gray's and Chapman's Manuals, the library would be sufficient. The Century Company of New York are the American publishers of McAlpine's Botanical Atlas.

KÖHLER'S ATLAS OF MEDICINAL PLANTS.

Now that six parts of this great German work are issued, it is in order to notice its plan and the character of the illustrations. It is intended to be completed in forty parts, with four plates, each comprising many colored figures. The descriptive text is short, giving the botany, history of the names and synonyms, time of flowering, officinal parts of the plant, and its preparations, analysis and literature.

The work which may be most justly compared with it is that of Bentley and Trimen. The first thing that strikes us in looking over the superb production of the latter authors is the marked difference in artistic value of the plates. Some of them are very fine and carry us back to the superior drawing and hand-coloring of André

Michaux's "*Forest Trees of North America*," while some fall below the best of Barton's. There are very few points of resemblance between Köhler's Atlas and that of Lloyd's "*Drugs and Medicines*," the illustrations in the latter being in black, and including the medicinal plants of every degree of value, while the former describes strictly officinal plants of the Pharmacopœias of different countries.

Each plate in Köhler's Atlas is devoted to one plant, with the dissected flowers and fruit, all in colors, from nature. The artistic value of the coloring is very satisfactory, and, unlike most illustrations of a recent date, are done in more subdued tones. There is nothing garish or flashy, but the effect is rather below than above the natural.

The drawing is especially well done, and approaches very nearly the old American masters of the earliest part of the century. The botanical student will find in them correct delineations of the coarse and minute structure of the plants, sufficient to enable him to master the orders and genera here described, and enable him to lay a foundation in the elements of the science.

But to all the lovers of the science we will say, whether or not they understand German, there is no work on medical botany illustrated with colored drawings now before the public which has anything like its merits, to be obtained at the price.

The first six parts contain illustrations of the following plants: *Laurus nobilis* (True laurel); *Citrus vulgaris* (Bitter orange); *Citrus Limonum* (Lemon); *Juglans regia* (Butter-nut); *Picea excelsa* (Spruce fir); *Taraxacum officinale* (Dandelion); *Tussilago Farfara* (Colt's foot); *Pinus sylvestris* (European pine); *Brassica Napus* (Rape); *Atropa Belladonna* (Deadly nightshade); *Hyoscyamus niger* (Henbane); *Arnica Montana*; *Cannabis Sativa* (Indian hemp); *Brassica nigra* (Black mustard); *Tilia ulmifolia* (Linden); *Linum usitatissimum* (Cultivated flax); *Acorus calamus* (Sweet flag); *Nicotiana tabacum* (Tobacco); *Althea rosea* (Garden mallow); *Rhamnus frangula* (Alder buckthorn); *Chelidonium majus* (Celandine); *Erythrea Centaureum* (Centaury); *Datura Stramonium* (Jimson Weed); and *Ruta graveolens* (Rue).

Medical botany does not seem to be a desirable study with the profession as in former years; but perhaps with the accessibility of such good works as Lochmann's photographic illustrations of medi-

cinal plants, the work of the Lloyd's, mentioned above, and Köhler's Atlas of Medicinal Plants (the latter at about 25 cents a part—the completed work for \$10), renewed interest will be taken in it, and the doctors at last be enabled to divide the honors with the druggists in a knowledge of *materia medica*. Orders for Köhler, sent to R. Friedländer & Sohn, 11 Carlstrasse, Berlin, will receive prompt attention.

DISEASES OF THE THROAT AND NOSE, INCLUDING THE PHARYNX, TRACHEA, ŒSOPHAGUS, NOSE AND NASO-PHARYNX. By MORELL MACKENZIE, M.D., London. Volume II. Diseases of the Œsophagus, Nose and Naso-pharynx. Illustrated. Philadelphia. P. Blakiston Son & Co., 1012 Walnut St. 1884. 8vo. Cloth. \$3.

After a long delay, due to the destruction of the entire edition by fire on the eve of its issue, this handsome volume has been published. Many good works have come out since this one has been in preparation, but none of its rivals deserve to take precedence. The Gullet, its anatomy, its examination, the instruments used in diagnosis and treatment; its diseases and wounds are considered in the first section of seventeen pages.

The nose, its anatomy; diagnostic explorations and examinations; nasal instruments; its diseases; its injuries. The diseases of the naso-pharynx are next considered, and lastly there is an appendix of ten pages, giving special formulæ for topical remedies, most of which are contained in the "Throat Hospital Pharmacopœia."

Dr. Mackenzie was in this country about a year ago, and carried home with him a belief that chronic catarrh of the naso-pharynx is "so extraordinarily prevalent in America, as compared with any other country, that it may be regarded with all propriety as a national affection." Of course this remark indicates that Dr. Mackenzie was not south of Richmond, and for that part of the nation, especially in New England, he is correct. Fortunately, it does not apply to the South Atlantic States, as the greatest number of our patients asking for treatment for this disease are recruits sent to us by reading the windy dissertations of Northern nostrum venders.

Dr. Mackenzie in his travels in this country visited the Pacific coast as far as Southern California. He is inclined to believe that nasal catarrh is due to the large prevalence of dust. "That a dusty atmosphere is the real cause of post-nasal catarrh is rendered probable by a

consideration of the anatomical relations of the naso-pharynx;" but he adds, "no doubt it is not the only one." * * * "Thus I have noticed that in many cases the sufferers have been persons who partake largely of pungent condiments, and the habit (almost universal in America) of taking sauces and pickles with every dish may be concerned in the production of the disease. The national dyspepsia is also probably a most powerful factor, and a well-known American statesman tells me that he has known many cases cured by 'abstemiousness and farinaceous diet.' Some physierians have attributed the complaint to the custom of overheating houses by hot air and steam, as is commonly done in America. In the winter the temperature is never allowed to fall below 70° Fabr., and is generally much higher." [The latter reason is only applicable to the region north of 34° N. latitude.]

We turned with some concern to the treatment of œsophageal stricture, and we are glad to see that Dr. Mackenzie can speak with so much confidence of remedies for this stubborn disease. He says: "If, however, mechanical measures do not succeed, galvanism will almost invariably conquer the disease. Indeed, this remedy is so certain, that, if ordinary medication fails, I at once have recourse to it. A ten or twelve celled battery should be used. The œsophageal electrode should be introduced into the gullet at least once a day, and kept in position a minute or two longer if the patient can bear it. The application should be made at such a time that a considerable interval may elapse between the treatment and the next meal. After a week or ten days the application should be made on alternate days for a fortnight, when the cure will generally be complete." Page 219.

The history of the operation of gastrostomy is confined to European surgeons, but will be greatly amplified when the author comes to consult Dr. S. W. Gross' article on the subject in the July number (1884), *American Journal Medical Sciences*. The author has included every possible disease of the nose, not excepting glanders, lupus and those of a syphilitic origin, and has given us a complete volume for consultation of especial value.

STUDENT'S MANUAL OF ELECTRO-THERAPEUTICS, Embodying Lectures Delivered in the Course on Therapeutics at the Woman's Medical College of the New York Infirmary. By R. W. AMIDON, A.M., M.D. G. P. Putnam's Sons, New York, 27 & 29 West 23d St.

"This little book is presented to the medical public chiefly as a

protest against the mysticism and charlatanry which have ever hung around the literature and practice of electro-therapeutics." * * *

"The aim of the writer has been: First—To present that amount of the subject of electro-physics necessary to the proper understanding of the construction and use of medical batteries. Second—To point out the commoner, gross physiological effects of electricity. Third.—To outline the methods of electro-diagnosis. Fourth—To determine the kind of electricity and its mode of application indicated in different pathological states." We give this much of the author's preface of this handsome little hand-book, to let our readers know in advance that he has done his work as he sets forth, and that he has succeeded in compressing it within less than a hundred pages.

AUSCULTATION, PERCUSSION AND URINALYSIS. An Epitome of the Physical Signs of the Heart, Lung, Liver, Kidney and Spleen in Health and Disease. Edited by C. HENRI LEONARD, A.M., M.D. Fully Illustrated. Illustrated Medical Journal Company, Detroit, Michigan. 1883. Price \$1.

This little duodecimo of 166 pages is carefully arranged for ready reference for the student, in auscultation and percussion and urinalysis. The latter division of the work is by W. H. Rouse, M.D., Ph. C., and it gives just such a clear and concise system as so many of our readers have been seeking for. A perusal of this little hand-book will be sure to be its recommendation.

THE PRACTICAL HOME PHYSICIAN. A POPULAR GUIDE FOR THE HOUSEHOLD IN THE MANAGEMENT OF DISEASE, GIVING THE HISTORY, CAUSE, MEANS OF PREVENTION AND SYMPTOMS OF ALL DISEASES OF MEN, WOMEN AND CHILDREN, etc. Also giving a concise account of the Structure and Functions of the Human Body, Hygiene and Rules of Health. Written by Henry M. Lyman, A.M., M.D., Christian Fenger, A.M., M.D., H. Webster Jones, A.M., M.D., W. T. Belfield, A.M., M.D. Illustrated with colored plates. Atlanta: Thayer & Ross. 1884. Pp. 1115.

It is approximately true that one-half of the people taken sick in the sparsely settled sections of the South do not receive medical assistance from authorized physicians. Most of the people in the remote country districts rely upon proprietary remedies, or hereditary domestic recipes. Occasionally far off in the forests you will come across a

copy of Buchan or Wesley's domestic medicine, but of late years Gunn's domestic medicine has increased its circulation.

How far books of the latter class should be recommended it is not easy to define. The necessities of the people in a sparsely settled country demand some book of advice until the doctor comes, and in very many cases until the end of the sickness. If this book of advice is written within the comprehension of persons ignorant of medical terms, and if it is arranged for easy reference, it will be sought after and relied upon.

The book we are now considering has on its title page the names of well-known physicians, and as far as we have examined it, we find it not only free from everything objectionable, but is written clearly and as free from technical terms as can be.

We believe it entirely feasible to make a key to a volume like this, which could be printed in tabular form, somewhat after the fashion of those prepared by botanists. Such a key, if prepared carefully, ought to serve to guide, in the time of emergency, by the grouping of symptoms, to a tolerably safe diagnosis. Of course, it would be necessary for the reader to have some intelligent knack in the estimation of symptoms, and it could only be made available for the commoner diseases; but "until the doctor comes," those weary hours of waiting for assistance for some member of one's family, it would be, in most cases, fruitless searching through 1100 pages to get a helpful hint.

There are many illustrations, the first of which is a colored diagram of the human body in separable layers, intended to give some idea of gross anatomy. There are two other illustrations of the body, one representing the liver and stomach, and the other the skeleton. Twelve colored plates illustrate medicinal and garden herbs, and are sufficiently well done to serve the purpose, although far from being correct in all instances. To sum up, this is the very best volume on domestic medicine yet given to the public, and ought easily supplant all rivals.

HEALTH HINTS FOR TRAVELERS. By JOHN C. SUNDBERG, M.D.

This is the name of a "health primer" full of valuable directions. "Having traveled myself in almost every climate and in every quarter of the globe," he believes that he has something valuable, and he says it in 61 pages. We would suggest, though, that Dr. Sundberg will make the experiment with extract *Rhamnus Pur-*

shiana as a remedy against constipation, and he will find that he can advantageously dispense with castor oil and rhubarb.

PORTRAITS OF THE FIRST TEN PRESIDENTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION. Mr. F. Gutekunst has just published a group of the portraits of the following gentlemen :

Drs. Stephen Smith, New York; Joseph M. Toner, Washington; Edwin M. Snow, Providence; J. L. Cabell, University of Virginia; John H. Rauch, Springfield; Elisha Harriss, New York; John S. Billings, U. S. A.; Charles B. White, New Orleans; R. C. Kedzie, Lansing; E. M. Hunt, Trenton.

These gentlemen were the first ten presidents of the American Public Health Association. The most of them are good likenesses, and the group will be highly prized by the friends of these gentlemen, and by all who have observed the immense amount of all but thankless labor they have bestowed upon the interests of the public health.

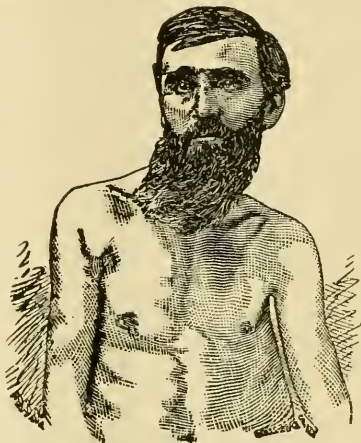
HOW MUCH MILK DOES AN INFANT AT THE BREAST TAKE DAILY. —Dr. J. Lewis Smith says (*Archives of Pediatrics*, July 15) that he and Dr. Chadbourne determined the amount of milk taken by several infants, by actual weight. Taking 451.9 grains as the weight of an ounce of milk of s. g. 1.031. He concludes that a baby the first five weeks who takes the breast every two hours receives only a little more than a fluid ounce at each nursing. Of fifteen nurslings between six and ten months, the average received by each twenty-four and six-tenths fluid ounces. Hence, if the nursings were eight in twenty-four hours, three ounces were taken at each nursing; if the nursings were twelve, the quantity each time was two ounces. Under two months of age the stomach cannot receive much more than one and a half fluid ounces. At six months the infant can probably take and digest three ounces, and in the last half of the first year four ounces.

PYOTHORAX.

[Reported by Dr. N. B. HERRING, Wilson, N. C.]

W. D. Bisset, whose deformity is accurately shown in the accompanying cut, and whose remarkable case is here described, is now living about fifteen miles from Wilson, and enjoys perfect health.

He was born on the 24th of May, 1838, and is now forty-six years old. The photograph was taken last January. Such histories are not only interesting as pathological curiosities, but they serve to caution the profession against hasty prognoses, even when we feel certain that we can predict the end from the beginning. Much of the case came under my own observation, and while the report is made up in part from the statements of the patient, it is confidently believed to be accurate in all its essential features.



From notes I find that I was called to see Mr. B. in October, 1861, and attended him twenty-five consecutive days in a fever which I diagnosed typhoid. In the winter of 1862 he enlisted in the army as a private, and was put on duty at Kinston, where he had pneumonia, and was returned home the latter part of April following. May 1st I was called to see him and found his left chest greatly swollen, with much pain and difficulty in breathing. Diagnosed fluid in left pleural cavity. Visited him the 5th and 10th, and in my ignorance left him to die. At this time I had practiced medicine only one year, and this case was too much for me. Like too many others, I had undertaken a man's work before I was grown, and assumed responsibilities for which I was incompetent. The young doctor is to be pitied and the medical curriculum to be blamed.

The man piteously begged to have his chest opened, but no one was bold enough, or had experience enough to do this only sensible

thing. He went on until the 1st of June, suffering all that mortal could suffer, with a constant increase of the accumulation, praying for death, and begging every visitor to open his side. Finally, in his extremity, he called for a knife and said he would open it himself. A neighborhood-bleeder and tooth-puller happened to be there, and in fear and trembling ventured to puncture with a lancet the most prominent part represented by the scar. This was done at 6 o'clock P. M., "*corruption poured out in a stream until 11 o'clock next day.*" It was not measured and the quantity is not known. For fourteen days after that one gallon, by measure, issued from the puncture every twenty-four hours, and then, dwindling down, ran a pint of pure pus every day *for twelve consecutive years*, when it suddenly ceased.

Four years after it was opened, and the man was able to do some labor, and under a strain at a saw-mill hemorrhage took place, and forming a clot, stopped up the vent. The accumulation soon produced intense pain, which forced him to remove the cloth, when, by measure, a half gallon of pus came from the opening, in a stream. Now it was that one of the merciless laws of physics played the roll of friend to torture yet more the ill-fated and ill-treated man.

The walls of the chest having lost their elasticity from the gradual collapse of four years, were in no condition to respond after the sudden expansion, and as the liquid contents gurgled from the cavity, air rushed in to take its place, when the sense of suffocation became so great that the man thought he was going to die. This agony lasted several hours, when, from sheer exhaustion, he lay down, and in rolling about on his bed the rigid chest-walls collapsed again, forcing the air out with an audible noise and giving complete relief.

About the tenth year hemorrhage set in without any assignable cause, and the bleeding continued three days, which came very near extinguishing life. He thinks he bled half gallon during the time.

A beautiful illustration is afforded by this case of the automatic action of certain parts of the physiology of man from long continuance of habit. As a means of cleanliness Mr. B. had worn a sort of pocket pad to catch the pus as it issued from his side, and to save trouble had a wooden paddle, with which he ladled the matter from this pocket several times a day. The secreting surface ceased its action suddenly at the end of twelve years, and the cavity closed

up. For weeks afterward he expected it to resume its wonted action, and in anticipation of this event continued to wear his pocket and paddle. During this time he would catch himself involuntarily lading out imaginary pus, and could never break himself from the habit until he threw away his pocket and paddle.

During the time of his greatest prostration—that is, immediately after his side was opened, and the discharge at its maximum, his appetite was enormous. His own statement is, that he could and did eat five pounds of fat meat daily, with vegetables and bread in proportion, for several weeks, when he was too weak to turn in bed.

A simple calculation will show that over five hundred gallons of pus were discharged from this man's chest before the secreting surfaces healed, and after all his suffering nature had the power to leave him a fair share of health and happiness. He was examined very carefully in January last by Dr. Nathan Anderson and myself, and no movement of the left chest walls, nor the slightest respiratory murmur could be detected. The lung is entirely gone and the cavity obliterated.

Why didn't it kill him?

Mr. Bisset is a sort of dry-witted, stoical philosopher, and his conclusion is, that the hardest thing a man ever tried to do is to die before his time comes; and he now says he shall not try to live when it does come.



DR. J. M. AMBLER.—It will be remembered that Dr. Ambler was the surgeon of the Jeannette Arctic Expedition, who lost his life in the pursuit of science, and whose remains were brought to this country by Engineer Melville. A brass tablet has been prepared, to be placed in the village church at Culpeper, Virginia, bearing the following inscription:

“JAMES MARKHAM AMBLER,

“PASSED ASSISTANT SURGEON, U. S. NAVY,

“Died on the banks of the Lena River during the memorable retreat of the ship's company of the U. S. Arctic steamer Jeannette, in the year

—1881—

“His sense of duty was stronger than his love of life.

“In memory of his noble example and heroic death, this tablet is erected by the medical officers of the United States Navy.”

ON SOME DISPUTED POINTS CONCERNING THE NATURE AND CONTAGION OF CHOLERA.

By D. H. CULLIMORE, M.D., M.K.Q.C.P., F.R.C.S.I.

It is not my intention in the present paper to give anything like a complete description of the history, origin and propagation of cholera. My effort is of a far more modest character, and will be limited to a disension of those points of special interest brought prominently before the profession, and indeed before the public, during the late epidemic in Egypt, and concerning which considerable disputation, and even heated arguments have arisen.

It must have been noticed by all who have given much attention to the subject of cholera in recent times, that grave differences of opinion exist as to its etiology and propagation, amongst authorities, the highest, most respected and experienced. Many eminent authorities in India deny its contagiousness (this term I apply in its largest sense), and attribute its epidemicity to some occult, atmospheric, or telluric causes, of the nature of which they are ignorant; such as earthquakes, stillness, heat and humidity of the air. Gentlemen of this school, which I may denominate the Calcutta school, are opposed to all measures of restriction and quarantine, and holding such views they are logically so.

All Continental and American authorities, and many of high standing amongst our own countrymen who have gained their experience either at home or abroad in our great dependancy, are in favor of the contagious theory, and maintain that through the influence of a specific microbe, germ or poison, the disease is communicated, either directly or through the medium of contaminated water, air, soil, etc., from the sick to the healthy.

Thus so far, as we find many of ourselves in harmony with our continental brethren as regards the propagation of the disease, we might, *a priori*, expect harmony as regards the measures of prevention to be enforced. Such, however, is not the case, for while the Continentals to a man are in favor of quarantine, the Englishmen who have favored us with their opinions seem inclined to support the views of the non-contagionists, who have logic as well as theory to support *them*. To what, then, are these differences of opinions

due? Are they capable of explanation without accusation of barbarism on one side and selfishness on the other? I think that most of them are, and in the course of this paper it will be my constant endeavor to try and reconcile them on other grounds, such as the intrinsic difficulty of the subject, the effect of early predilection and of different fields of observation in later life.

First, as to the nature of the fundamental cause! That this is a specific germ or bacillus appears to me to be the only supposition that can attempt to explain satisfactorily the great variation in the influence of all other etiological conditions.

The recent discovery of the cholera microbe, minute stabiform germ like the bacillus of glanders, in the utricular glands of the lower portion of the smaller gut tends to confirm this view, though as things present, while we are justified in saying that the parasite is peculiar to cholera, for it has been found in Indian, French and Egyptian cadavera. Its relations, whether as a cause or result of the disease, are not known. Until, therefore, the bacillus is found to set up cholera in man or the lower animals, its discovery contributes nothing to the knowledge of the contagiousness of the disease. Even the onset of cholera after inoculation, in the absence of corroborating causes, though it would render its contagiousness probable, would not *mutatis mutandis* render it certain. The modifying influence of climate and the effect of other accidental surroundings, would limit its universality under everyday conditions.

Crudelli has discovered the bacillus of ague, and can produce this condition by inoculation, yet we do not on that account rush to the conclusion that intermittent fever is contagious, for stronger evidence, which we cannot overlook, teaches us the reverse. Thus it is not by the discovery of a special bacillus, either of cholera, of leprosy, of ague or of tuberculosis, or even the reproduction of the disease by its injection into the system that the contagiousness of these affections must be determined under the varying conditions of everyday life, and in climates and localities so different and remote.

Such a discovery, however, in addition to epidemicity, and particularly to such worldwide epidemicity as we see in cholera, when corroborated by observation as to the spread of the disease, brings additional support to the contagious theory by concentrating what was hitherto indefinite and diffused.

That this parasite is of paludal and vegetable origin there can, I

think, be no doubt, for one can easily understand that a minute parasite of a specific nature, and peculiar to certain Indian districts, may develop its action wherever conveyed, under conditions either within the body or without it, favorable to its development and propagation. In this power of sustaining life in every climate it differs from the bacillus of ague, which, although of paludal origin, and active enough within its limited sphere, is a poor exotic, speedily designed to perish on its removal therefrom. These favorable conditions are external and internal, the former having reference to certain insanitary states of the soil, water, air and human surroundings; the latter having reference to certain favorable conditions of the individual, such as fatigue, alcoholism, physical disease, and, above all, collapse, and great depression of the nervous system. The latter cause is especially worthy of note, as it explains the onset of cholera after great national calamities, as, for instance, famine in India and unsuccessful war in Egypt. This theory also explains why it is that stagnant fluids, containing more or less organic matter, are the chief vehicles of the cholera germs, as they are of all other proto mycetic forms. It is owing to this that the ground water, when the wells are low, and polluted with the contaminated soil, the drinking water and washing water, play such an important part in the production of this disease. But no favorable condition of soil, no amount of filth, or polluted water are capable, *per se*, of causing cholera. They only become so when they furnish the germs with the proper nutritive matter, when other special conditions of their growth are presented, and when the means of communication with the human organism is open. The germs may also spread by becoming attached to solid bodies, or in thoroughly infected districts by polluting the atmosphere.

Given the germs and the external favorable conditions, is this all that is necessary? Certainly not! In addition there must be the predisposing external cause—a crack in the armor of the individual vital economy, such as the mental depression above referred to. Cholera is not peculiar in this, but conforms to the general law. But leaving this out of account, the severity of an attack is in a direct ratio to the size of the dose, or rather, of the virulent activity of the poison. Thus an epidemic of cholera is surrounded by a zone of diarrhœa. This the mycetic theory explains, for it is owing to the comparative lesser capacity of the air for germs. The lowest organisms, as Leber informs us,

and as the followers of Sir Joseph Lister are well aware, live on the air, and when attached to solid bodies. But they lead a much less active life, and their capacity of increase is much diminished outside of fluids, and thus while the air and other substances may contain and transport cholera, they are less active agents than the fluids in which the parasites have already undergone multiplication.

Again, cholera comports itself differently at different times, under identical conditions of soil, water, locality and climate. A town may escape on one occasion, only, however, to suffer quite severely on another. This is owing to the variety of the conditions, favorable or the reverse, to the development of the germs—a state of things common to all fauna and flora. Even under seemingly favorable states, the germs, having attained excessive exuberance, become worn out, and thus fall an easy prey to the innocent, but younger and more vigorous bacteria of the pools, or even of the intestines, which suggests the idea of cultivating and inoculating these cholerae germs, so antipathic to the active cause of the disease. This plan might prove as effectual, as it would be infinitely less hazardous than homœopathic injections of attenuated germs of the same disease.

To sum up, there are five conditions necessary for the development of the disease: (1) a special germ, (2) a favorable medium for development, (3) sufficient contact with the organism, (4) only a slight development of the cholerae bacteria (bacteria which kill the cholera germs), and (5) an individual predisposition or condition incapable of resisting the power of the poison.

This view, then, I maintain, explains more satisfactorily than any other the ever-varying and mysterious phases of cholera.

First.—It explains better than any theory directed to the influence of water, air, soil, filth, sewage, etc., for these conditions are either permanent or periodic, while cholera appears only at long and irregular intervals, and always, unless its history is to be recast, by slow and steady approaches from its epidemic home in India.

Second.—It explains them better than any causes referable to malaria, epidemic influence, atmospheric or volcanic conditions. The meaning of the first two is incomprehensible, they are words only so far as our present object is concerned. Certain portentous and gloomy atmospheric states, tending to disturb the equanimity of the feathered tribes, and to engender the mutual animosity of the denizens of the woods, have been observed, but no reliable information has been recorded.

Thus the blood-red sunsets of London during the last week of November passed away without connection with any calamity. The volcanic theory of Von Lier is but a passing eruption, as was pointed out by Sir Joseph Fayrer, who showed clearly enough that the endemic region of cholera in India was not of volcanic character.

Thus by negative, as well as positive evidence, have I shown the vegetable and paludal nature of the cholera germ, which is further supported by the frequent outbreaks along the malarial deltas of Indian and Egyptian rivers.—*Cincinnati Lancet and Clinic*.

INTERNATIONAL REVIEW OF MEDICAL AND SURGICAL TECHNIQS.—This handsome journal has now become a monthly—from the August number—and comes from the presses of one of the editors, Palaska, Florida. We congratulate the editors and publishers upon the success which has attended them. Subscription price \$2 a year.

THE *Nation*, noticing a recent lecture by Dr. Morell Mackenzie on hay-fever, gives the following: "In this country the pollen of the *Ambrosia artemisiifolia* (Rag-weed)—a wretched weed, whose name is wholly unwarranted by its real character—is charged with most of the mischief." [There would be an immense flight of our citizens to the top of Roan Mountain, or somewhere there, if pollen from rag-weed causes hay-fever, for the high-ways and by-ways and waste-places are groaning with a crop of these and wormseed (*Chenopodium ambrosioides*;) but the disease is not yet fashionable in the South.]

VIOLATIONS OF THE CODE.—Two flagrant violations of the Code of Ethics, consisting of the placarding of secret remedies, have been brought to the attention of the editor of this JOURNAL. Unfortunately, as a member of the Board of Censors, he is constrained not to make these matters public until the meeting of the Society in Durham in 1885. It is unfortunate that there should be this restraint, and he would place his resignation in the hands of the President, if it would not have the appearance of avoiding disagreeable duty. These cases will be fully investigated and the decision unflinchingly presented to the Society.

CURRENT LITERATURE.

COCA, TEA, COFFEE AND GUARANA COMPARED.

We would like to reprint in full all that *Squibb's Ephemeris* (July, 1884) has to say about the approximate value of coca, tea, coffee and guarana, but can give only an abstract of the articles.

The coca found in the markets of the world has been exceptionally bad. The writer has seen for more than a year past but one or two small lots of moderately good coca, and he has concluded to give up the preparation of the fluid extract of the drug. He says ;

"The florid stories of a multitude of travellers and writers, up to and including the testimony of Dr. Montegazza, received a considerable support from so good an authority as Sir Robert Christison, who reported very definite results from trials made upon himself and upon several students under his immediate control and observation. These favorable observations were not confirmed by Mr. Dowdeswell, who, after experiments in the physiological laboratory, concluded that its action was so slight as to preclude the idea of its having any value therapeutically or popularly.

There can hardly be any doubt that coca, in common with tea and coffee and similar articles, has a refreshing, recuperative and sustaining effect upon human beings, and when well cultivated, well cured and well preserved, so as to reach the consumer, of good quality and in good condition, it is at least equal to good tea, and available for important therapeutic uses. * * * Coca is well known to be a very sensitive and perishable drug, only fit for its somewhat equivocal uses when fresh and green and well cared for in package and transportation. It is very well known that tea, if managed, transported, handled and sold as coca is, would be nearly or quite worthless, and therefore coca, managed as the great mass of it is, must be nearly all of it comparatively worthless. It was a curious surprise to find, upon investigation, that coca, unlike tea, coffee, Paraguay tea (*Ilex Paraguayensis*), Guarana and Kola nuts contained no caffeine, but an entirely different active principle, known as cocaine, possessing similar physiological effect in much smaller

doses. In order to throw additional light on the comparative activity of the principal individuals of this group of substances, trials were made upon a person of regular habits, aged sixty-five, not habituated to the use of either tea, coffee, tobacco or any other narcotic substances, of good physical condition, and not very susceptible or sensitive to the action of nervines or so-called antispasmodics. The proposition in these trials is first measure coca against tea, then coffee against guarana, and finally to compare the four agents, using pure caffeine as a kind of standard to measure by. Taking three grains caffeine as a dose, it gave a comfortable evening of restedness, without sleep or any very strong tendency to it until 10 o'clock. The person experimented on, without anything to counteract sleep, the rule was he could read with difficulty by 9, and either be asleep or go to bed by 9½. The three-grain dose of caffeine repeatedly obviated all this discomfort up to 10 o'clock, but did not prevent the habitual, prompt and sound sleep, from the time of going to bed until morning. This was taken as a model of estimation for all the other agents. Coca was now tried in the same way. It took about two and a half fluid drachms of a well-made fluid extract of coca to give the same effects as two and a half grains of caffeine. An assay of the coca used shows that it contained 2.6 p. c. of cocaine. Now, since three drachms of this coca, or three fluid drachms of its fluid extract gave the same physiological, or perhaps, therapeutical effect, as three grains of caffeine, and as the three drachms contained about .45 grain of cocaine, it follows that cocaine is about 6.5 times more effective than caffeine, but it also follows that the coca accessible, and even the very best coca, contains very much less of its alkaloid than those articles which yield caffeine do of that principle.

Dr. Squibb then shows the qualities of a fluid extract of tea, introducing it by the name of *camellia*, the generic name of tea. Made by the process given, it is an almost syrupy, transparent liquid, of a rich, dark, olive green color, almost black, with a fragrant odor of the tea and its agreeable bitter taste. When mixed with water, syrup, or wine, it makes a somewhat opaque mixture, which is unsightly, but nothing settles out. Diluted with its own menstruum, the mixture is, of course, perfectly transparent. Each fluid drachm of this extract would yield by careful assay 1.72 grains of caffeine and 105 minims, or 1.75 fluid drachms would yield three grains caffeine. It is noticeable that 70 minims of this fluid extract

of camellia is equivalent in its effects to twice and a half times that quantity of a fluid extract of the best accessible coca.

Tea can therefore be readily substituted for coca as a medicine, as it can always be had of uniform good quality and of uniform cost.

From the study of the subject the writer is convinced that when coca or its fluid extract are indicated in therapeutics, that tea or its fluid extract will be found to be a superior substitute in doses of a little over a third the quantity.

In narcotic poisoning, or when it becomes necessary to interfere with or control accidental narcotism from any cause, three or four fluid drachms, or even more, may, and should be used, proportioning the dose to the condition which is to be counteracted.

Guarana is a rude, heterogeneous mixture, the composition of which has never been known, and probably for the reason that its composition has never been constant. The editor of the *Ephemeris* does not see how such a substance could ever have been so largely accepted in the materia medica. It was a short time after its introduction that it was found that guarana contained a large proportion of caffeine, and this caffeine was traced to the seeds of *Paulinia*, and these were justly supposed to be the active medicinal agent. Although in making the comparative test of therapeutic effects "it required a good deal of courage to swallow preparations of such a mixture as guarana;" nevertheless it was carefully tried, and it was found to require just about a fluid drachm to give the effect of three grains of caffeine—three drachms of coca, or seventy grains of tea. Now, a fluid drachm of a fluid extract containing 4.3 p. c. caffeine would contain 2.58 grains of caffeine, so that 2.58 grains of caffeine in its natural condition in guarana—if it be in its natural condition there—is equivalent in effect to three grains extracted and purified caffeine artificially prepared." Dr. Squibb proposes to abandon guarana for a fluid extract of green or unroasted coffee.

A fluid extract of unroasted coffee, prepared in the same way as adopted for tea, gave a preparation just about half the activity of tea.

The reduced equivalency of the several substances presented in one view is as follows: Of artificial caffeine three grains is equivalent to 180 grains of coca, which contains about .45 grain of cocaine; and to seventy grains of tea, containing 2.6 grains of caffeine.

and to 150 grains of coffee, containing 1.95 grains of caffeine. This would make the amount of caffeine in the coffee a little the most active of all, since a smaller quantity produced an equal effect. But it is so near to the tea that they may be considered identical; while the caffeine in the guarana appears to be the weakest, and to approach most nearly to the artificially extracted caffeine. Besides this, it was rather indistinctly and indefinitely perceived throughout the alternations of trials that, in the effects of all four of the agents, there was something superadded to the effect from the caffeine. To say that their effects were better is very indefinite, yet it is about all that can be said. Perhaps it will qualify this opinion or judgment to say that the effects seemed broader or more agreeable, and gave a better sense of rest and well-being. The writer finally speaks of the doses and warns that those mentioned might be heroic in the cases of delicate or impressible persons.

These observations have given much that is practically important in regard to the agents considered, and it will subserve economy and rational therapeutics to follow out the substitution of a known drug like the proposed fluid extract of camellia, for unknown substances of proven inferiority.

LARGE MODEL FOR DEMONSTRATING OPERATIONS ON THE EYE.

Mr. J. F. Streatfield exhibited to the *Ophthalmological Society of the United Kingdom*, a model exactly ten times the size of the eye, and the model eye-instruments on the same scale. The apparatus has a half motion of rotation, and the front hemisphere of the eye could be fixed in any direction. The sclerotic and eyelids are constructed of white felt. The cornea is made of stout glass. The iris is imitated by a thin sheet of India-rubber, with a round hole for the pupil. The cataractous lens is made of xylonite. The internal and external rectus muscles are represented by pieces of linen bandage. With this apparatus could be represented the *modus operandi* of peripheral section of the cornea, of iridectomy, of

extraction of cataract and of squint-operations. The anterior chamber could only be entered at the sclerotico-corneal junction. At any part of the upper half-circumference the knife, forceps, pricker, or curette could only be entered at the sclerotico-corneal junction. At any part of the upper half-circumference the knife, forceps, pricker or curette could be entered between the felt sclerotic and the glass cornea, which gives way for its admission, and resumes its natural position when the instrument is withdrawn. The sheet rubber iris can be seized with iris-forceps, drawn out and snipped off.

BORATE OF QUININE.

The amorphous borate of quinine is an amber-yellow, almost crystalline-looking powder. It has a mild, bitter, by no means disagreeable taste, and is soluble in equal parts of water. As the drug can be sold so much cheaper than sulphate or muriate of quinine, and as its taste would specially adapt it to the diseases of children, Drs. D. Finkler and D. Prior in Bonn, instituted a series of observations for the purpose of determining its effect. (*Deutsch. Med. Wochens.*, 6, 1884.) The results were as follows :

The remedy was administered in doses varying from 8 to 16 grains. These doses were given every half or every hour, so that within from two to four hours *in maximo* 48 grains were used.

For the purpose of discovering how the drug is borne by the stomach, it was tried in many cases of tuberculosis, and in those of acute and chronic gastric catarrh. Some of those patients were in the habit of vomiting when they committed the last error of diet. *In none of the very numerous cases did the borate of quinine ever cause vomiting.* Even in phthisical patients, suffering from chronic catarrh of the stomach, and being very sensitive to any nauseous drug, the remedy never induced any augmentation of their gastric troubles.

The drug had not only the same anti-febrile effect as quinia sulphas, but it had also besides a peculiar disinfecting action upon the intestinal canal, and in patients, who had used the remedy for a number of weeks, not the least deleterious influence on stomach or intestines was noticed. In patients suffering from high fever, and

having previously vomited after calomel and muriate of quinine, the borate not only caused the same reduction of temperature, but it was also well borne by the stomach. It seems to be specially well borne, if a larger quantity of water or a small dose of brandy is taken after it. It never produced tinnitus aurium. One of the experimenters, suffering from a severe nasal catarrh, took two doses of eight grains each without any bad after-effect, while the same doses of muriate of quinine usually caused a sleepless night, in consequence of the violent buzzing in the ears.

The administration of borate of quinine in the evening induced a reduction of temperature in the morning; if it was taken in the morning, a fall of temperature was noticed at about 2 p. m., while if then a dose was given the temperature declined in the evening, so that in this respect the borate also resembles the effect of the muriate or sulphate of quinine.

Considering, therefore, the cheapness of the remedy, and the fact that it has the same effect as the quinine salts usually employed, and considering its greatly better taste, and the fact of its being well borne, even in large doses, by the most delicate stomach, its general introduction probably will be but a question of time. Its antipyretic, as well as its disinfecting action, is probably due to the boracic acid. It is manufactured in Germany and there sold for but half the price as sulphate of quinine.—*Medical and Surgical Reporter*.

MIRYACHIT—INCONVENIENCE OF A DISEASE OF IMITATION.

A contemporary has the following, which might have been foreseen. The complaint is obviously a dangerous one :

“There is a new disease, called in Russia ‘Miryachit,’ and in Java ‘Lata.’ The person affected by this disease is compelled to imitate anything he sees or hears. A doctor, dining with a friend, had just explained to him the nature of the disease, when the host, pushing forward a bottle of the best ‘Encore,’ said: ‘Try that, doctor, it’s ten years old.’ The doctor mixed a stiff glass, and, about half emptying it, smacked his lips, remarking, ‘Tip-top, sir.’

Suddenly Barney, an Irish butler, who had been present during the doctor's explanation, seized the bottle, and, filling a tumbler, emptied it at a gulp, and smacking his lips, shouted, 'Tip-top, sir.' 'What the dence do you mean by that!' shouted the infuriated host. 'Begorra, sir,' replied Barney, humbly, 'Shure, I'm afeard I'm afflicted wud the latha.'—*British Medical Journal*.

UNIVERSITY OF NORTH CAROLINA.

We call attention to the advertisement of our State University in this issue. Seven Trustees from different parts of the State made recently a careful inspection of its workings and rendered a most favorable report as to its teaching, morale, etc. We are pleased to notice that much attention is given to instruction of *practical* value to men in the various pursuits of life, and that the spirit of economy rules among the students.

PACIFIC MEDICAL AND SURGICAL JOURNAL.

This sterling journal, by new arrangements, has combined with the *Western Lancet*, to be issued under the old name. The junior editor of the *Pacific* retires, and the senior editor, Dr. Gibbons, is associated with Dr. Whitwell, of the *Lancet*. We wish the old journal renewed success, and we believe by the new combination there will be a largely increased subscription list.

NORTH CAROLINA PHARMACEUTICAL ASSOCIATION.

The above Association met in Charlotte on the 13th of August, in the rooms of the Chamber of Commerce, and was called to order by Mr. W. H. Green, of Wilmington. Forty members were present at roll-call on the first day. Thirteen new members were added to the list.

NOTES.

SIR ERASMUS WILSON, LL.D., F.R.S., the well-known author of the old text-book on Anatomy, and also as a Dermatologist, died recently. He was born in 1809.

THE EDITOR OF THE *Peoria Medical Monthly* states that two patients who were recently operated upon by the Heatonian method died a few days afterward from tetanus. A third patient suffered severely from an extensive phlegmonous inflammation of the whole lower limb.

INOCULATION—VACCINATION.—The first inoculation in North Carolina for small-pox was done in Salem in 1781; the first vaccination was done in Salem in 1802, at which time eighty persons "were inoculated with the cow-pox."—*The Moravians in North Carolina*, pp. 202, 203.

A BOLD ASSERTION.—Dr. Romain J. Curtis, in the *Medical and Surgical Reporter*, says: "No one will or can gainsay that a preliminary education in science is a benefit to a man who enters a medical college, but I believe that a classical education is, if anything, an injury to him."

CURCI, experimenting upon dogs by trepanning and attaching a uranometer, finds that chloral, chloroform, ether, paraldehyde and quinine produce cerebral anæmia; morphine and nitrite of amyl, hyperæmia. Atropine in small doses has little effect; in larger doses it is rather an anemiant.

THE INTERNATIONAL MEDICAL CONGRESS opened in Copenhagen on Sunday, the 10th August, in the presence of the King and Queen of Denmark, the Council of the State, and the King and Queen of Greece. The Congress includes 350 Danes, 100 Swedes, 100 Norwegians, 800 persons of other nationalities.

THE FIRST DELIBERATE and definite proposal to open the abdomen in search of an obstruction in the intestine was made by Paul Barrette in 1672. The first operation of the kind is recorded by Bonetus in his *Sepulchretum*, published in 1677. The first operation in England for the same purpose was done by Sir Benjamin Brodie. The case was published in the *Lancet* for 1827, p. 502.—*British Medical Journal*.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

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THE STUDY OF INSANITY—ITS IMPORTANCE AND ITS NECESSITY.

By J. D. ROBERTS, M.D., Superintendent Eastern North Carolina
Insane Asylum, Goldsborough, N. C.

(Read before the Medical Society of North Carolina, at Raleigh,
May 21st, 1884.)

*Mr. President and Gentlemen of the Medical Society of North
Carolina:*

The subject of insanity, in all its phases, beliefs in regard to its causes, treatment, etc., has undergone a revolution in late years, both in the minds of the medical profession and the laity. The different steps of this revolution, from the time when the insane man was considered as being possessed with a devil, until now that insanity is recognized as a disease, the scope of this paper and the time at my command will not admit of discussion. Insanity is now universally recognized as a disease, and as such is amenable to treatment, and to the physician is the task of this treatment given. This task has been heretofore assumed by comparatively few members of the profession, and generally then in connection with asylums for the special care of the insane.

According to the tenth census (1880) of the United States, we have within the bounds of our State 2,028 insane—an increase since 1870 of 62 per cent. We have now asylum accommodations for 600 patients, thus leaving, even with no allowance for an increase in the number of insane since 1880, in round numbers, 1,400 insane uncared for in asylums.

The high per cent. of increase here given is probably due as much, if not more, to more careful enumeration in the last census, than for previous years. Mr. Wines, special agent for gathering statistics of the defective classes claims, that former statistics were unreliable, and that much more care was bestowed on this subject in the tenth census (1880) than in any previous enumeration.

From information received of Drs. Grissom and Murphy, together with my own experience, I am able to compute the proportion of chronic to acute insane last year, considering a case to be chronic when the duration of the attack has lasted for over one year. In this connection I will remark that the chances for final recovery become exceedingly small in chronic cases. In another connection I shall allude to the subject of early treatment, etc.

Of the admissions to the asylums of this State last year (1883) the per cent. of acute cases averaged 32 for the three asylums. The Western Asylum was opened last year and received many of its patients directly from the Asylum at Raleigh, as their homes were in the Western counties. The per cent. of acute cases admitted there was 17. For the other two asylums the average was something over 40, which is perhaps nearer correct than the first figures, namely, 32. Of 565 patients now under treatment about 8 per cent. are considered curable, with perhaps as many more with a doubtful chance of recovery.

From these figures it will be seen how inadequate are our asylum accommodations to our insane population, and the importance and the necessity for some further relief for this unfortunate class can be realized. The time has arrived, if we consider the increase of insanity and other facts in regard to the subject, when we may well ask, Should not the general practitioner devote more time and attention to this branch of medicine? It is one of the objects of this paper to urge upon the profession the importance of, and necessity for, a more extended knowledge of insanity. While but a tyro in the specialty, being in a position for observation and seeing how

little study is devoted to the subject, I am impelled by the ignorance displayed to enter this plea: One has but to examine the applications sent for the admission of patients into our different asylums to see the deplorable state of even general information that is exhibited. In looking over these papers it is often wondered as to whether the bad state of affairs should be charged to ignorance, carelessness or indifference, and this, too, when the information given is under oath. These applications are for the purpose of giving those in charge such a history of the case or such information in regard to it as to enable them to form some judgment of the probability of cure, desirability of admitting the patient, and assist in deciding the course of treatment. These applications often contain grave mistakes made by physicians in committing patients to an asylum and the want of discrimination as to the different phases of the defective classes, namely, idiocy, imbecility and insanity. While an idiotic patient or an imbecile may be troublesome at home or in the county's care, still it does not follow that such persons should be pronounced insane and sent to an asylum. With the small asylum accommodation, in comparison with the total number of insane, such cases being incurable should not be sent away from home at all, as other patients, perhaps more curable, are thereby crowded out of the asylums. There is often a desire of relatives and county officials to be relieved of the care and expense of patients, but it would be going too far to say that the physician lent his aid to the accomplishment of such a desire against his professional opinion. I am sure that were the subject of insanity more generally understood, and its different phases studied more carefully, there would not be this difficulty to contend with.

The utter want of the history or information above alluded to, or its misleading character, has been felt by all the institutions of the State. Though the questions propounded as the law directs are furnished, with full instructions, in blanks, the applications sent are often unintelligible. So, too, acting under the information given therein, idiots and imbeciles have been admitted as insane, and I venture to say that each institution now has cases of this kind, admitted under the impression that they were insane, and as such entitled to the care of an asylum.

The importance of a more extended knowledge of mental diseases is clearly shown in the fact that most, if not all the first-class medical colleges of the day, have lecturers on the subject, and from the number of new books on psychology and psychological subjects many of gigan-

tic intellect have devoted their time and talents to the elucidation of this question, still there is a dearth of psychological work in the ranks of the general profession. Specialists in any department, devoting, as they do, attention to one branch, are expected to make more advancement than others; yet it is not necessary, nor is it so, that all progress comes from them, and it is the general practitioner that makes practical application of knowledge gained to the cure of disease.

Owing to the want of sufficient accommodation for the insane, the larger portion of our asylum receptions are now, and are liable to be for some time, of the chronic class. It is safe to say that the per cent. of our cures would be doubled did the patients receive the necessary treatment early in the disease. The lamented Kirkbride, for over forty years the Superintendent of the Pennsylvania Hospital for the Insane, held that insanity was as curable as any other serious disease, and that, if recognized and treated early, 80 per cent. were curable. From the statistical tables of twenty-three asylum reports for the year 1883 the average per cent. of cures is only 30.72. This includes all classes, but as there are but few asylums in the United States for chronic or incurable patients, the figures are a fair criterion of what our asylums are effecting in the way of cures. While I have not transferred these statistical tables here (for want of room), it is certainly shown by them that those asylums with the largest per cent. of cures received the smallest number of chronic cases.

All authorities agree as to the importance of early treatment in insanity, and not having sufficient asylum accommodation for the rapid increase, it becomes necessary to look to the general practitioner for its recognition and early treatment. On this subject I cannot do better than to reiterate the views expressed by the late Dr. DeRosset in the NORTH CAROLINA MEDICAL JOURNAL, Vol. I., No. 2, in an article entitled "The Early Recognition of Lunacy." Dr. DeRosset says: "It cannot be too strongly urged upon the profession, particularly general practitioners, that with them, far more than with the asylum, superintendents are the greatest promise of material advance in the cure of insanity; for every part of its history has been diligently explored, except that which exists before it comes under the observation of the expert. The family physician alone, from his constant and intimate relation with his patients, is in a position to see the mental cloud while it is yet a mere speck upon the horizon, and to foretell, in its curable stages, a disease which, if it pass unheeded, sooner or later

numbers its victim among the confirmed insane and reduces his chances of recovery to those of the average asylum inmate—seldom more than thirty per cent. No sympathy with family pride or any baser motive should be allowed to oppose itself to the practitioner's duty—humanity, morality, science, all demand a recognition of facts when their existence is declared by the methods which we shall later point out.

“Let it, then, be well impressed that in the history of nearly every case of lunacy there is a prodromic period, when reason is as yet uninjured, and which is possible of recognition, and in which a favorable prognosis, under wise treatment, is fully warranted. There is no sudden leap from reason to dementia—*natura non facit saltus*—the passage from one to the other is through an infinite variety of gradations, etc.”

Beyond these facts of difficulty in obtaining asylum treatment and the advantage of early observation enjoyed by the general practitioner, there is a growing demand for home treatment. Friends are often loth to commit their afflicted ones to the care of strangers and hirelings, and find a natural repugnance to the notoriety consequent upon sending a patient to an asylum—an unwillingness to allow a family affliction of this character to be known—and, hesitating long after the recognition of the disease, valuable time in its treatment is lost.

There is among alienists and psychologists, as there is with the laity, a wide difference of opinion on the question of home versus asylum treatment of the insane. It is not my purpose to enter into the discussion of this question now. In its early stages intelligent, well-directed home treatment, when it can be procured, will succeed. If a case is to be sent to an asylum, the earlier it can be done the better. Violent cases, homicidal or suicidal patients, those with destructive tendencies, chronic cases of dangerous proclivities, etc., will probably require the care of an institution suited to their needs.

It can be claimed, and with much reason, too, for the claim that the general practitioner has not the time to devote to the study of those diseases generally turned over to the specialist. It is fashionable, I know, and the idea is growing, too, to make a specialty of almost every branch of medicine. In our large cities, where our physicians are in large number, this may do very well. The general practitioner, though, the “country doctor,” whose nearest professional brother is many miles off, can but keep abreast of the times in all branches, for he knows not what day or hour he may be called on to treat almost any

of the numerous diseases that "flesh is heir to." Though he may not be as well prepared to treat cases generally going to specialists, as the physician who devotes his whole time to that particular branch, yet it is especially important that a disease as grave as insanity, with the fearful consequences following neglect of treatment, should receive more attention than it does, in order that an early diagnosis might be made and appropriate treatment instituted. When a case of insanity has progressed to a stage where the whole character is changed, where there is a complete difference as to his behavior, perhaps wild, violent, etc., the diagnosis is easy. But in its commencing stage it is not so easy, and the diagnosis requires study to detect the delicate shades between mental health and disease.

The literature of psychological medicine, especially from an American standpoint, is not up with the times. We have had issued in the last few months several new works, but I regret to say that they are not reliable for the general practitioner. They are all written by specialists and nearly all take a stand antagonistic to insane asylums. As is well said in an editorial in *Gaillard's Medical Journal* for January, 1884: "If there is any one work which is more wanted at the present time by the medical profession than all others, it is one on the subject of psychiatry—one that is simply, clearly, intelligibly written, one in which there is no evasion of the truth—in which the author is willing to openly confess ignorance, and not always trying to conceal this by hiding it amid a mere garnature of words. A work totally free from that great and very familiar folly of putting forth a pendent technology in which to disguise a patent inability to indicate demonstrable truth. A work, in brief, in which the author will describe, in plain, simple, intelligible language, what he can prove to be the truth, and in which he will, when it is incumbent on him to do so, openly confess his ignorance and that of the specialist whom he seeks to represent.

"Such work would be bought by almost every physician and attorney in this country. It is the great want of the medical and legal professions, and one which is to-day wholly unsupplied."

These remarks are on the subject of psychiatry, and in the same editorial, speaking of the new books recently issued on the subject of insanity, he says:

"One has but to examine these volumes cursorily to find endless antagonisms, inconsistency, contradiction and ambiguity."

The laws of our State, as, indeed, do all civilized countries, recognize insanity as a disease, and requires the opinion of a medical man as to the fact before a man can be committed to an asylum. Unfortunately, it does not state the qualifications, and so any one with an M.D. attached to his name is competent, under the law, to pass on this subject. The State already recognizes the importance of the State Medical Society in the laws in regard to examinations for license, and in the State Board of Health, (?) and it would be well to further recognize the importance of our profession by an amendment to the present asylum laws, requiring the examining of physicians to be eligible to membership in the State Medical Society.

That we have need of a higher education, both literary and medical, among our doctors, is acknowledged by all. We should, perhaps, look to the medical colleges for this higher education, and to them, too, for more information on the question of insanity. At this time, when the obtaining of a medical diploma is so easy, we cannot wonder that we have so many entering the profession totally unprepared for the work.

It is not though, to these cheap-John doctors alone that these remarks apply, or to them alone that this plea is made. It is to the general profession, to the physicians that are scattered throughout the State, that I appeal for an increased study of the diseases of the mind. The times demand it; the increase of insanity demands it; suffering humanity demands it; the want of sufficient asylum accommodation demands it; our patients throughout the length and breadth of the land demand it. And, gentlemen of the profession, I stand here before you to-day and urge upon you the importance of this question. I adjure you to think of the miseries of a blighted reason, of a dethroned mind, of a gigantic intellect, once towering to the skies, capable of swaying the multitudes by the stupendous power of his brain—all, all, groveling in the abyss of despair or lost in the mazes of a hopeless dementia. And consider how little might have been the means of saving a human being from such destruction—how a knowledge of the case might have, in its incipency, enabled you to stem the tide and save a fellow-creature from mental ruin. I plead with you, gentlemen, to take hold of this matter, for with you of the general profession, more than with the asylum superintendent, lies the power to stay the progress of this crying evil.

HEMORRHAGE OF THE BRAIN—GRANULAR ATROPHY OF THE KIDNEY.

A Clinical Lecture, Delivered by Prof. Dr. H. NOTHNAGEL, in
Vienna, Austria.

(Reported by Dr. GEORGE G. KINLOCH, of Charleston, S. C., now
in Vienna.)

Patient fifty years old—says he is paralysed in his left side—that he can't see very well. He also has a kidney affection, a palpitation of the heart, and is troubled with shortness of breath. Patient descended from healthy parents. In February of the past year he commenced to suffer with pain in the head, palpitation of the heart and shortness of breath. In May difficulty in walking was added thereto. In the last months the shortness of breath and the palpitation have increased—œdema of the lower extremities manifested itself; then he observed disturbances of sight, which developed themselves gradually. Five days ago, he observed, on waking up, that the left side of his body was paralysed. For twelve years he has had a cough with a slime-like expectoration.

Question—Do disturbances of the sight follow from affection of the heart?

Answer—Yes, and mainly induced by an embolus of the arteria centralis retinæ: otherwise disturbances of sight do not follow from heart affections. But embolism takes place suddenly, not gradually, and patient says that with him the disturbances have come on gradually, first in one eye and then in the other. The disturbances of sight lead us to think of an atrophied kidney. With granular atrophy of the kidney, retinitis very often occurs. The paralysis of five days could also occur in the course of a heart affection; it could arise from an embolus, and also from an atrophied kidney; then it must be a hemorrhage.

We can, therefore, before we have disturbed the patient, make in a conjectural manner the diagnosis of *atrophied kidney*, *retinitis* and *hemorrhage* of the *brain*. The patient lies comfortably on his back. Since nine months he has suffered with *headache*, but he has not always *pain*, only now and then. At present he has a constant

buzzing in the head. To this I will add the following diagnostic observations: When a strong-looking man comes to you, a man who is not intensively engaged in brain-work, who is not nervous, is not a drinker, who appears to live under quite normal conditions of life, and complains of headache—unless you can discover some obvious cause for this headache, you must, putting severe brain affection to one side, think of two things—first, diabetes, and second, nephritis. With the atrophied kidney, pain in the head occurs very often; this is to be set down as an uremic affection, as an expression of a certain degree of uremia. Apart from this, neuralgic pains can occur from chronic nephritis.

The sense of the patient is clear; color of the countenance pale; mucous membrane slightly red; icterus is not present. The space between the palpebral borders of the left eye is narrower than that of the right. The frame is reasonably strong; muscles rather flabby, but he has evidently fallen off in flesh; dropsy is not at present apparent; pulse 124; respiration 28; skin on body (trunk) soft and dry; temperature, to the touch, not elevated; radials slightly rigid, somewhat tortuous; pulse-wave high, tension raised above the normal. This increased tension can be due to different causes. It is possible that it is here dependent on arterio sclerosis; besides, this is a sign of hypertrophy of the left ventricle. Quantity of urine 1100 c. c. (37 oz), therefore lessened; specific gravity 1015; reaction acid; with acetic acid and ferrocyanide potassium quite a quantity of albumen shows itself; with the microscope we find a number of granular cylinders and a few red blood-cells; white blood corpuscles are not to be seen. If white corpuscles were present the albumen might be due to these. We have here, then, to do undoubtedly with a chronic nephritis. What shall we use in order to tell the nature of this nephritis?

1st. The aetiology and the history. Is this disease connected with malaria, with tuberculosis or with syphilis? The aetiology and the history of the case tell us here only that it is a chronic form with which we have to do.

2nd. The urine; and

3rd. The general condition of the patient and the investigation of the other organs. In spite of this, though, the diagnosis, in a great number of cases, is not so easily made. The quantity of the urine and the specific gravity are *approximately* normal. With the

true atrophied kidney the quantity of the urine is increased and the specific gravity is lessened. In the typical cases the specific gravity ranged between 1008 and 1012. We could here have to do with an amyloid, or with a secondary form of atrophied kidney. The microscope also does not differentiate, as no white cells are seen; these, however, may be wanting in chronic atrophy. The ophthalmoscope shows retinitis albuminurica in both eyes. These are entire white plaques and also fresh hemorrhagic points. When a retinitis Brightii is discovered, then you can with certainty declare for nephritis. We have no points upon which we can diagnose an amyloid condition. What does this retinitis signify, then? In what form of nephritis do we have this retinitis most frequently? In atrophied kidney. Why this is the case is a problem which has been very nearly solved. It is believed that the hemorrhage which one finds on the background of the eye arises from an affection of the blood-vessels, that the continued increased pressure brings about a fatty degeneration, following from which there is a rupture of the arterial walls and hemorrhage. This retinitis is wanting in some cases of atrophied kidney, but in *very many* cases it is present. Now, it is a question whether it is present only in the true primary atrophy, or in other forms also. Bartels has declared that if it is not frequent, still it *does* occur in other forms of nephritis, especially in the secondary form of atrophied kidney, as, for example, in syphilitic kidneys. You see, therefore, that we cannot make a certain diagnosis, even from this most important symptom, of any particular form of chronic nephritis. The apex beat of the heart is, in the recumbent position of the patient, not to be felt; one feels rather an expansion or heaving of the whole cardiac region, and also of the lower sternal border. The heart's dullness goes over the mamillary line. Auscultation gives loud sounds. The second sound over the aorta is somewhat intensified—drum-like. We have, therefore, a sign of hypertrophy of the left ventricle. This can be due either to arterio-sclerosis or to nephritis. The lung reaches on the right side as far as the lower edge of the seventh rib—it is somewhat lengthened. The percussion note is rather loud and deep; there is, therefore, undue resonance of the right lung, a slight emphysema, as it is called. Behind, entire right lung, auscultation, gives bronchial breathing. In front, vesicular breathing. Besides a little catarrh there is nothing abnormal with the respira-

tion. Appetite of patient tolerable. Tongue moist, coating grey yellow. Bowels a little constipated. The liver feels slightly granular to the touch. This may be due, though, to the condition of the abdominal walls, which were formerly fat, but recently have grown thin. We come now to the *nervous system*.

Five days ago the patient awoke in the morning with paralysis of the left side of his body. In the evening previous patient undressed himself. At 5 o'clock next morning patient got up in order to urinate. He observed *then* nothing, but at 6:30 he could not stand up. The grip of his right hand is much stronger than that of the left. In the left fore extremities exists a paresis; this form we term hemiparesis. By deep inspiration the right half of his thorax is expanded more than the left. This you will observe most always in the cerebral hemiplegia. In ordinary respiration one sees no great difference in expansion of the two sides, for that is a reflex action. If the patient voluntarily takes a deep inspiration, then the affected half of the thorax does not advance equally with the other half; shows that the nervous supply to the pectoral and other muscles here is lessened. In cerebral affections the one-half of the thorax is implicated. The left corner of the mouth hangs down, and the left naso-labial fold is somewhat fallen too. There exists, therefore, a paresis of the facial. The corrugator superciliorum acts well on both sides. If he shows you his teeth you observe a slight paresis. In paralysis of the facial, which occurs from cerebral affections, one observes only a partial failure of the same. For instance, the three upper branches for the frontalis, the corrugator supercilii and the orbicularis palpebrarum remain free, what may be called the "mouth facial," is affected. The first named branches do take a part, but in such a slight degree, that in an ordinary observation there is nothing of it to be seen. When the whole facial is paralysed the lesion is situated below the crossing point in the pons. By a lesion above the said point only the "mouth facial" will be usually affected. There are only a few points in the pons where, when a lesion takes place the entire facial is affected and then only in exceptional cases. According to Maynert, in such cases the fibres which run around the nucleus lentiformis (Gehirnsehen Kelschlinge) must be involved.

The tongue comes out straight, and the patient can count very well. Between the right and left upper extremities there is a dif-

ference in temperature of 0.5° C. in favor of the left. This difference does not exist in the lower extremities. We wish to ascertain thereby if the vaso-motor paths are concerned. We do not see this in all, but in *many* cerebral lesions. On the affected side the temperature of the skin is raised; the skin appears somewhat dull and redder than usual. This affection of the vaso-motor channels takes place rather quickly after a few hours. Cases also occur in which the face takes a part. Sometimes there are similar symptoms as those found by Claud-Bernard in experiments on animals: flushing of the face, profuse secretion from the nose and the eyes; the palpebral opening becomes narrower and the pupil smaller, on account of the laming of the dilator. The temperature fluctuates from the affection of these vaso-motor paths: in the morning it is higher on the affected side, in the evening lower, or it may change only in the course of a few days. Reflex phenomena are very nearly the same on both sides. *Testicle reflex* on the right side is quite evident; left side not so apparent. This is very important for the diagnosis in many cases. You find a man out on the streets totally unconscious, and you do not know whether you have to do with a case of poisoning, a uremic coma or a severe hemorrhage—then this reflex comes into use. It is, however, not *always* to be relied upon. I have made experiments on doves. If you stroke with your finger, or any other object, the toes of doves, they cling, as a result of reflex action, to your finger or the object. On account of this reflex action they can sleep upon a twig. By injecting chromic acid into one side of a dove's brain you have, by increased brain pressure, a disappearance of this reflex action on both sides. With rabbits the same thing takes place.

Through increase of the intracranial pressure we find that reflex is temporarily abolished. This disappearance is but temporary; it is afterwards followed by an absence of reflex on the *one* side. If the testicle reflex is wanting on one side, you can be positive of a cerebral lesion. In women you can by the "mamillary reflex." Disturbances of sensibility are wanting. We have, therefore, to do with the classical picture of a hemiparesis. We must now determine—of what nature is this process. It can be either a hemorrhage or a softening. Not taking into consideration abscesses, the so-called necrobiotic cephalomalacia is caused by an occlusion of blood-vessels, and this by an embolus. The embolus originates, as a rule,

from the heart. This is here not the case. Second, from autochthonic thrombi, that is, thrombi not forming from an embolus, but through coagulation of fibrin taking place at the point. This can occur by arterio sclerosis. By arterio-sclerosis the nourishment of the walls of the vessels is impaired, an ulcer is formed, and at the affected part a thrombus. If sclerosis exists in the peripheral arteries, it is more than likely to exist also in the arteries of the brain, and we have, therefore, every reason to suppose that the obstruction by the thrombi could lead to a hindrance of the circulation, and this to a necrotic softening. Is this, now, a hemorrhage or a softening? In the text-books the symptoms which speak for thrombosis and those which speak for a malacia are placed alongside of each other. In very few cases, however, can you say which it is; you can only surmise. All the points which come up for a differential diagnosis are insufficient for the formation of the same. One takes into consideration the advanced age of the patient—farther, the seat of affection. It has been said that if the lesion was on the left side it spoke for a softening, because it was formerly believed that softening occurred most frequently in the left hemisphere. This is not correct, for statistics have proved otherwise. Again, one takes into consideration the mode and the features of the attack itself. A hemorrhage is accompanied by an apoplectic stroke, but *not* so the thrombotic softening. By apoplexy is not meant, as is usually inferred, the *paralysis*, but the sudden loss of consciousness, the slow pulse and the lowered respiration. This expression covers only the mode of exhibition of the cerebral symptoms. If a patient does not lose consciousness you cannot speak of apoplexy. Hemorrhage and apoplexy are not synonyms. We say that the affection has occurred under the form of an apoplectic stroke. It is now asserted that the hemorrhage occurs under this form, but not the softening. But this is also not right, for thrombi, when they thoroughly occlude the blood-vessels, can be accompanied by apoplexy. We cannot, therefore, assert whether a softening or a hemorrhage has taken place. In this case, however, we can speak with a certain amount of positiveness. We find here atrophied kidney, increased tension in the arterial system and hypertrophy of the heart. We know that under increased pressure in the blood-vessels of the brain rupture and hemorrhage may take place. But even in this case we must think of thrombotic malacia. Where is

the seat of the lesion? The hemorrhage, as well as the softening takes place, as a rule, in particular portions of the brain, and these portions are, the great central gangliæ, the lenticular body, the corpus striatum and the internal capsule, which lies between the two last; the thalamus opticus, the posterior part of the internal capsule and the neighboring part of the semi-centrum ovali. It is for anatomical reasons that it occurs in these parts, which we will discuss on another occasion. From these named portions we exclude the lesion from the thalamus opticus, as this would not cause paralysis. Then comes up for consideration the internal capsules. Andral has already collected statistics to the effect that in 360 cases about 300 have shown the clinical picture, viz: the ordinary form of hemiplegia, and were localized in the above mentioned portions of the brain. The remaining 60 were localized in other portions. Inasmuch as the vaso-motor channels course along in the posterior part of the internal capsule as far as the so-called knee of the same, so is it possible that the lesion will be found here.

TREATMENT.

At present the chronic nephritis calls for no particular treatment, because no outspoken symptoms are present. Absolute rest is necessary. There is no indication for blood-letting. If the patient has pain in the head and thinks cold applications would be agreeable, you can apply them, but of course the process is not influenced thereby. At present we can in no way overcome this local disease, and cannot even combat it. It is dangerous to employ electricity in this condition. To produce absorption of the hemorrhagic effusion is impossible. Mental excitement, and in fact everything which increases the blood-pressure, must be avoided.

SELECTED PAPERS.

SIR ANDREW CLARK, BART., M.D., ON ALBUMINURIA.

On this occasion it is not my intention to deal with the complex problems raised by questions concerning that disturbance of physiological conditions which issues in the appearance of albumen in the urine. I shall confine myself to a much humbler task; and, regarding the subject from a merely clinical stand-point, and avoiding those aspects of it which have been already much discussed, I shall pass beyond empirical experience no farther than may be necessary to make plain a few of the problems ripening for physiological pathology to solve.

In all preceding discussions about albuminuria, the speakers seem to me, if I am not in error, to deal with the presence of albumen in the urine as if it were of renal origin; or, at any rate, they neither sufficiently distinguish renal from non-renal albuminuria, nor explicitly set forth, if they are known, the grounds of discriminating between them.

To avoid confusion in the course of the discussion, it would, therefore, seem necessary to recognise the existence of non-renal albuminuria, to specify in cases of this sort the sources of the albumen, and to set forth, as far as our present knowledge will permit, the means whereby renal may be distinguished from non-renal albuminuria.

In a good many women, for a few days before and for a few days after menstruation, the urine, free from blood-discs, leucocytes, or pus, contains, sometimes continuously, sometimes intermittently, small quantities of albumen. In women guilty of habits of secret personal impurity, a serous fluid is sometimes secreted into the vagina; and afterwards, mixing with the urine, is found therein, responding in the usual manner to the tests for serum-albumen.

In some young men, excited by sexual desire and denying it indulgence, there is secreted from the urethra or its adjacent glands

a fluid which, mixing with the urine, yields to the application of the ordinary tests evidence of the presence of serum-albumen.

In eczema of the bladder, in the early stages of villous tumour, and in the venous congestions of aged men, albumen transudes into the vesical cavity, mixes with the urine, and may be readily mistaken for albumen of renal origin.

In the case of the late E. D., about whom I was consulted for renal disease, the albumen in the urine was proved to be independent of renal disorder, and to have its origin in a small delicate villous tumour of the bladder.

I am sure that illustrations of non-renal albuminuria could be added to by others present at the discussion better than by me; but I have adduced from my own experience a number of examples, sufficient to warrant further investigation, and to justify me in bringing the subject to the notice of the Section.

And now arises the question: In what way can we distinguish the non-renal from the renal albumen? I suppose that we shall be very near the truth if, in a given case of albuminous urine, where there are no constitutional evidences of renal disease, where the urine is of normal constitution *plus* albumen, and where some local cause adequate to its production exists, we say that the albumen is non-renal. But we shall not be certain. For any one of the specified local causes may exist without albumen necessarily passing into the urine; and the kidney may yield albumen to the urine without any material alteration of that secretion. In such possible, but rare cases, one must critically watch the state of the constitution, which rarely fails to give early information of renal degeneration.

Of the non-renal forms of albuminuria occurring in leucorrhœa, cystitis, catarrh of the ureters, and other affections in which histological elements are always present in the urine, it may be said that their diagnosis is attended with no serious difficulty; but, in such cases, one may easily forget that the existence of an albumen of non-renal does not exclude the existence of an albumen of renal origin; and, indeed, that not unfrequently they concur.

I pass now to the subject of cases of renal albuminuria, and divide them provisionally into those of functional and those of structural origin. So much has been already said, and so much will be again said, at the meeting concerning structural albuminuria, that I will leave its discussion entirely in the hands of others more competent,

and also more eager, to deal with it than I am. For, to say the truth, I think that, in the present state of knowledge, the discussion of structural is of less interest and of less importance than the discussion of functional albuminuria, to which I shall confine the few observations I have to offer.

To the use of the term "functional" many general and some just objections will be raised. It will be urged that every lesion of function must have its correlative lesion of structure; and that, to use any term which appears to deny this fact, or fails to give it at least implicit recognition, is at variance with the principles of science, and constitutes a backward instead of a forward movement in knowledge. To the logical coherency and force of this argument I make no objection; but I contend, as often before I have contended, that mere logical integrity is not, in such matters, the final test or measure of truth, which, in the present state of knowledge, can sometimes be reached only along lines which seem, as we understand them, at present to be illogical. And in no way could this paradox be better illustrated, or more strongly enforced, than by a critical study of what is called functional albuminuria. It is, I venture to say, certain that, in the kidney giving rise to albumen in the urine, there occur states—mechanical, physical, chemical, and, in a provisional sense, vital—which are neither tangible nor visible, which not only cannot be estimated, but are even, by the most delicate instruments of research, incapable of recognition; states which may often come and go, disordering function and disturbing health, and yet leave no abiding marks of their presence and actions. Such states are different in manifold ways from organic states, and must be so named as to ensure recognition of their fundamental differences. For this is not all that has to be said concerning these functional states. We are so much concerned with anatomical changes; we have given so much time to their evolutions, differentiations and relations; we are so much dominated by the idea that, in dealing with them, we are dealing with disease in itself, that we have overlooked the fundamental truth, that these anatomical changes are but secondary, and sometimes the least important, expressions or manifestations of states which underlie them. It is to these dynamic states that our thoughts and inquiries should be turned; they precede, underlie and originate structural changes; they determine their character, course and issues; in them is the secret of disease; and,

if our control of it is ever to become greater and better, it is upon them that our experiments must be made.

I say, therefore, that those functional affections of the kidneys, attended by the presence of albumen in the urine, are of the utmost importance to the better understanding of organic disease, and deserve a more prolonged and critical study than they have yet received.

Of the forms of functional albuminuria with which I am practically acquainted, I shall mention four as worthy of further consideration. They are the nervous, the oxaluric, the hepatic and the gouty. I leave on one side the functional albuminuria of cold and the various forms of peptonuria connected with indigestion.

The first two forms occur chiefly among adolescents; the latter two are found for the most part among elderly people.

I am as sure as I can be about anything incapable of demonstration, that all strain of nervous system, especially under emotional excitement, is capable of producing functional albuminuria. Among twenty men entering a competitive examination, no one is albuminuric; at the close of the examination, lasting a week, three are found to have albumen in the urine. A gouty man with moderately healthy urine attends a political meeting, and delivers an exciting speech. Soon afterwards a little albumen is found in the urine; but in a day or two it disappears. In a fortnight he delivers another speech in circumstances of great excitement, and the albumen reappears in the urine.

The most numerous illustrations which I have met of functional albuminuria have occurred in young men aged from eighteen to thirty, whose urine was of high density, and loaded with oxalate of lime. To put the matter in another way, I have not very often followed carefully a case of "oxaluria" with high density and an excess of urea, without finding sooner or later traces of albumen in the urine. This is by far the most interesting and instructive of cases, and I regret that the time allotted to such communications as this will not permit me to consider them in detail.

Illustrations of the hepatic group occur for the most part in middle-aged men. There is congestive enlargement of the liver with catarrh; the portal system becomes loaded; the skin is dry and icteric; and then, without any appreciable change in the urine beyond the presence of a little bile, albumen appears in it. With

the subsidence of the hepatic trouble, the albumen disappears from the urine.

Temporary albuminuria in gouty persons whose kidneys are as yet structurally unaffected is common enough in certain conditions. When the balance between ingoing and outgoing is disturbed, when the blood becomes loaded with excrementitious stuffs, when there is increasing vascular tension, with restlessness, feverishness, dry skin and headache, then, as a common rule, traces of albumen appear in the urine.—*British Medical Journal*.

MANAGEMENT OF THE THIRD STAGE OF LABOR— ALBUMEN IN THE URINE OF PREGNANT WOMEN— TEMPERATURE OF LYING-IN-WOMEN—SACCHARINE URINE—UTERINE RUPTURE.

We are indebted to the *Philadelphia Medical Times* (August 23) for a very instructive report by Prof. Theophilus Parvin of his service as obstetrician during the quarter ending April 30, in Philadelphia. The report is too long to reproduce entire, but we give abstracts which we trust will do justice to a very excellent paper.

During Dr. Parvin's term of service 72 women were confined, and from these cases he makes the following commentaries:

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"And here let me, for the time at least, lay aside these statistics to consider the conduct of the third stage of labor. The subject invites consideration in this paper by the following facts. One of the colored women failing to expel the placenta within an hour after the birth of her child, the gentleman having charge of the case introduced his hand into the uterus and removed the after-birth by piecemeal, or at least the greater portion of it. That patient had septicæmia, and infected each of her neighbors. The colored obstetric ward at this time was terribly crowded, the beds so close together that a patient could almost roll from her own bed into the next one.

"Shortly after this I was called to a woman in one of the white wards, who had been delivered of her child three hours before, but the

placenta was retained. The patient's pulse was good; there was no hemorrhage, nothing but the simple fact of delay in the third stage of labor. A little friction of the uterus and compression of its fundus through the abdominal wall caused the expulsion of the placenta in a few minutes. There was no fragment of the after-birth or of the membranes retained. The genital organs of the patient were not touched either by the *interne* or by myself in this delivery, nevertheless she had septicæmia. Finally, a third patient had the placenta retained for nearly five hours, and then it was expelled. She had septicæmia. These three patients recovered.

"In studying the phenomena of placental delivery, we find there are three stages, viz: first, the separation of the placenta from the uterus; second, its extrusion from the uterine cavity after its conversion into a foreign body by its detachment; and, third, its expulsion from the vagina. Delay may occur in any one of these stages, that in the last, of course, being the most easily remedied. The separation of the placenta from the uterus is made by uterine retraction, and probably, instead of being marginal in some cases, central in others, is usually general.

"A practical question is here presented: Is this separation facilitated by lighting the placental end of the cord? In other words, Ought the obstetrician to use two ligatures or one? The advocates of two ligatures claim that in this case the placenta, being larger, fuller, firmer, cannot so well follow the retraction of the uterus as it can if thin and flexible from the loss of blood, and therefore in the former case is more certainly and completely detached. This is doubted by some, denied by others; nevertheless it seems rational. But, admitting its truth, it is certain that if a single ligature be used the placenta is smaller, and hence can pass through a smaller uterine orifice. This practice, no matter what its effect upon the first, facilitates the second stage of placental delivery.

"After uterine retraction has separated the placenta, uterine contractions expel it into the vagina, while the abdominal muscles, aided, it may be, in some slight measure, by the contractions of the vagina, cause its final expulsion.

"In the spontaneous discharge of the placenta from the uterus it does not seem yet settled whether the placenta usually presents the fetal surface or the margin at the os uteri. The doctrine of Matthews Duncan has probably for the last few years been most generally adopted

by British and American obstetricians; my own belief is that it is correct: at least in some thirty cases of delivery, taking the method advised by Dr. Duncan to test the presentation, I found in the majority that the placenta descended through the os with its margin presenting. French obstetricians have not accepted Duncan's views; and indeed the recent observations of Pinard and others seem to prove that the placenta usually presents by its fetal surface.

"Now, a practical lesson from this study of the mechanism of placental delivery is that, adopting the view of Duncan, traction upon the cord—a traction which of course is never to be made when the placenta is still attached to the uterus—is mischievous, for it interferes with the normal presentation; but if the normal presentation be that of the fetal surface, such traction facilitates the second stage of delivery.

"Few practitioners are willing to trust nature this far, but guard against delay in the delivery of the placenta by following the uterus down with the hand upon the patient's abdomen, according to the expression and the method of the Dublin school, as the fetus is expelled, thus keeping the hand upon the uterus at least as a sentinel to warn of uterine relaxation, and, better still, as a stimulus to, and a reinforcement of, uterine retraction. A general observance of this practice reduces to a minimum cases of post-partum hemorrhage, of delay in the discharge of the placenta, and of hour-glass contraction.

"And now, coming to the practical point of more direct interference with the third stage of labor, what circumstances demand it, and how it is to be made?

"I believe the teaching of the Philadelphia school has been favorable to early interference: at least such delay as shown by the Strasburg statistics would not have been allowed by her great teachers. Dr. Hodge advised moderate traction upon the cord at the end of half an hour or of an hour; and Dr. Meigs stated that he never waited for the spontaneous extrusion of the placenta more than an hour and a half, for he always supposed that if it would not take place in one hour, there was little prospect for its taking place in twenty-four hours. Now, with all reverence for the names of these great men, and with, I trust, due personal humility, it seems to me their teaching was wrong. Even moderate traction upon the cord, if the placenta be attached, is liable to do harm, and traction

is not necessary to find out whether it is detached. The statistics quoted prove that one cannot make a time-table for nature in regard of placental delivery: she may effect that delivery long after Dr. Meigs' hour has passed.

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“Temperature record from two daily averages of twelve cases of normal recovery from labor. The first temperature is that of a woman delivered within the preceding twenty-four hours :

Morning	98.4	98.4	98.2	98.2	98.2	98.4	98.0	98.2
Evening	98.8	98.8	98.8	98.4	98.9	98.8	98.4	98.4

“There were opportunities for observing the influence of apparently trifling causes in producing marked elevations of temperature. Thus, one patient, whose condition was normal, insisted upon getting up the fifth day and dressing herself; she did so, notwithstanding the remonstrance of the nurse, and her temperature rose to a little above 100° . Either from feeling badly, or possibly from the moral influence of the thermometer, she was willing to return to her bed. Another patient, doing well apparently, save that her temperature was 100° , got up the fourth day; her temperature rose to 103° ; she returned to bed; her temperature in a few hours was only 100° , and in two days was normal. In another case an irritant cathartic, or that which proved to be such, the bitartrate of potassium, was given the fifth day, and for a short time the patient's temperature was nearly 105° , but the next day it was normal. On the other hand, the gravity of a case may be much greater than the temperature indicates. Thus, in a patient with fatal septicæmia the temperature during the first five days only once rose as high as 101° , a part of the time was only 99° , on the sixth day rose to $102\ 1\cdot5^{\circ}$, on the seventh fell to 101° , and then on the morning of the eighth was $103\ 1\cdot5^{\circ}$; she died that day. In the abstract of a paper by Dr. Angus Macdonald (*British Medical Journal*, May 10), the statement is made that in some of the worst and most rapidly fatal cases of septicæmia the temperature never rose over 101° , if so high. The explanation given was that the vital centres were attacked with such a quantity of poison that death occurred before the tissue-changes ending in heat took place. Dr. Macdonald further referred to the important difference in the course of temperature in lymphatic and in phlebotic septicæmia, there being in the former a single rigor with

sudden and continuous high temperature, and in the latter a series of successive rigors followed by corresponding depressions. Siredey had previously remarked that a temperature chart of a patient having puerperal septicæmia will readily show whether the disease is the lymphatic or the phlebotic form. When Oslander, at the beginning of the present century, and others since him, described remittent puerperal fever, doubtless they had under observation cases of phlebotic septicæmia. I am sure these sudden and marked declines of temperature have led practitioners into false diagnoses, especially since attention was redirected by two distinguished American physicians to the occurrence of malarial fever in child-bed: we would much rather believe a patient had this disorder than septicæmia, and such desire may assist the diagnostic error, an error I know that I have committed, and I have more than once witnessed its commission.*

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"The presence of albumen in the urine of the pregnant woman has often, even generally, engaged the attention of obstetricians; but comparatively little concern is usually shown as to its presence during labor, or in the puerperal state. Possibly it may be quite as important to examine the urine of the lying-in as of the pregnant woman, especially if she has had even slight septicæmia.

"But, first, how frequent is albuminuria in pregnancy? In seventy-two pregnant women albuminuria was found in five. It will be observed that this proportion is very much less than that given by Charpentier,† quoting Dumas, who, combining the statistics of several observers, makes the proportion one to five or six. It seems to me, both from hospital statistics and from observations in private practice, this proportion exaggerates the frequency of the accident.

"By the albuminuria of labor is understood not only the disorder as occurring during labor, but also that of the two or three days

* If any one should doubt the difficulty sometimes presented in diagnosing between septicæmia and malaria in child-bed, he may be referred to a lecture delivered by Prof. Luigi Mangiagalli upon malaria in its relation with the puerperal state, *Annali di Ostetricia, Ginecologia e Pediatria*, 1883. In this lecture Mangiagalli remarks that in the puerperium the diagnosis between septicæmia and malarial infection is not always easy—that the difficulty may be most grave, almost insuperable.

† *Traité des Accouchements*.

immediately preceding. This is very much more frequent than the albuminuria of pregnancy; but the cases examined with reference to this point were too few to determine the proportion.

"Seven of the seventy-two women had albuminuria after labor; I think the number was much greater, but some of the women suffering with septicæmia did not have the urine examined until after convalescence, and the results of examinations made in others were not properly kept, or at least were not placed in my hands.

"In three of the seven mentioned the albuminuria was slight and transient. In four women convalescing from septicæmia, the urine was found to be albuminous one month after delivery. Two had pus, blood and hyaline casts in the urine; in a third, no pus, but blood and casts were present in the urine; as to the urine of the fourth, the microscopic appearances were not noted. In regard to two of these patients, I know that the catheter was first used after their being brought from the 'fever' to the 'convalescent ward,' and therefore the explanation which Olshausen has suggested of the renal disorder fails in these cases; catheterism had nothing to do with its causation. In explanation of these two cases, it is probably better to accept the teaching of Siredey, who regards puerperal nephritis as a constant complication of uterine lymphangitis or phlebitis.

"Women may apparently, but not really, recover after pregnancy and labor; especially if there has been septicæmia is there a liability of renal disorder becoming chronic, and it is only by actual examination of the urine that the integrity of the kidneys can be determined.

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Sugar in the urine of pregnant and of nursing women was first shown to occur by Blot in 1856. Differences of opinion hold as to the constancy of its presence in the conditions stated, as to its source and as to its character. Macdonald found it in each of thirty-five cases whose urine was examined, and therefore regards it as present in all cases at some time or other of the puerperium. But neither Kleinwachter nor Spiegelberg refers to it as always present. In the examinations made daily of the urine of fifty women at the hospital (these examinations began a few days before, and continued seven days after labour), four women had sugar in the urine before labor, and six after labor, one of the six being also one of the four. In this woman the sugar was constantly and

largely present up to eight weeks after delivery; she had remarkably well developed mammary glands, and a most abundant secretion of milk. In this case Blot's suggested test for a good nurse—to wit, the quantity of sugar contained in the urine—would have proved true, so far as abundance of milk was concerned.

“It has been shown that abrupt suppression of nursing causes the appearance of sugar in the urine: thus it is commonly observed in mammary abscess.

“The fact that removal of the mammary glands in an inferior animal recently delivered causes disappearance of sugar from the urine, proves that it is incorrect to call the cases where sugar is found in the urine in pregnancy or child-bed, cases of glycosuria, but rather of lactosuria, unless we attach only the literal meaning to the first word in the compound glycosuria. Spiegelberg refers to the condition as an absorption diabetes; and this seems the opinion of most authorities. Tarnier, however, regards as very plausible the hypothesis that the sugar eliminated by the kidneys was sugar made very probably by the liver in view of the lacteal secretion, and which was not utilized in consequence of the momentary suppression of this function; further, he thinks new researches necessary, in addition to those of Hofmeister and others, to determine the question as to whether this sugar is glucose or lactose.

“Whenever there is an exact correspondence between the milk-supply and the demand, the former not being in excess of the latter, it is probable sugar will not be found in the urine; I think, therefore, that the experience of Macdonald—showing saccharine urine in all cases of lying-in-women—is not the law.

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“The final subject presented to you is that of uterine rupture. In reflecting upon the history of my three months' service, no event occurred in my duties to these unfortunate women—women often worthy of the profoundest pity as the victims of misfortune and of man's perfidy—which causes me greater sorrow, in silence or in recital, than a case where the uterus was ruptured in consequence of a shoulder presentation, a case which ended in death the eighth day after delivery. Yet I would fail in duty to my profession, that has been so good, so generous to me, if I did not make the case fully known. The patient was a well-formed, healthy multipara; she had been in labor nearly twelve hours when I first saw her, the left

shoulder presenting. Ether was immediately given until she was thoroughly under its anæsthetic effect; and then, without violence, nay, with great ease, I passed two fingers behind the right knee, brought the foot down, and turning and delivery were effected in a few minutes; the placenta followed almost immediately; the child, quite a large one, was dead. The patient came out from the anæsthesia satisfactorily; her pulse was good; there was no complaint, no shock, no great hemorrhage. Yet that woman had a ruptured womb, the tear beginning at the os uteri on the right side, involving the cervix and the lower part of the body of the uterus, this condition being made known by the post-mortem. If it be thought I ought to have known this accident at the time of delivery, I can only say that like ignorance happened to Dubois, to Hervieux, to Tarnier, and others—the first revelation of the uterine rent being made at the post-mortem. These slight tears of the womb are, as Hervieux has suggested, probably more frequent than generally thought. No, my self-reproach is not in this, but in not having made, myself or by another, an examination during pregnancy, so that the abnormal presentation could have been corrected, if not then, at least early in labor. But let this pass. The great practical lesson to be drawn from the accident is not only the importance of an early rectification of a mal-presentation, but also an appreciation of the danger of rupture of the uterus and how this accident occurs. The drawing now shown gives the position occupied by the child, and also and especially gives the change in form and thickness of the two cavities of the uterus, which, as so admirably described by Bandl, are formed when nature is unable to overcome the obstacle to labor found in such case. The one cavity is formed by the body of the uterus, and its walls become thicker and stronger; the other, by the cervix, and its walls growing thinner—become, indeed, so attenuated and weak that a very slight additional strain causes a tear at some point; that strain may come from a uterine contraction, or solely from the introduction of the finger; and thus peril from action, peril from delay, must be before the obstetrician's mind when called to a case of neglected shoulder presentation.

“Of course, had I seen this patient an hour or two earlier, the event might have been different. The pressure of the presenting part had been so severe that a slough of the vesico-vaginal wall occurred, and the patient, had she recovered, would have required

an operation for the resulting urinary fistula. I have thought that possibly the uterine rent was in part the result of a slough also; but, be this as it may, there was not the slightest indication given at the post-mortem that any hemorrhage in the abdominal cavity had taken place."

REVIEWS AND BOOK NOTICES.

MALARIA AND MALARIAL DISEASES. By GEO. M. STERNBERG, M D., F.R.M.S., Major and Surgeon U. S. Army, etc., etc. New York: William Wood & Co., 56 & 58 La Fayette Place. Pp. 329.

Notwithstanding there has been so much written about malaria in this country, the task of writing a thoroughly good volume remains unperformed unless we can find the want supplied in this volume. S. H. Dickson, Bartlett and others have given us classical volumes, written in scholarly style, and satisfactory in their day, but neither of them were able to hold a position equal to the chapters on malaria and malarial fevers in Wood's Practice. In fact, it is to the latter work that students must still turn to get a description of malarial fevers as occurring in the South, certainly, and if the text could be amended by the observations which the thermometer had verified. This very deficiency, however, is one that drives the student to the writings of English authors who practiced in India, and so of late years Aitken's and Reynold's Practice were standards, until the excellent volume by Dr. Flint expanded into a completer work.

The subject of malaria, always uppermost in the minds of the general practitioners of the South Atlantic States, has in a few years become not only a topic of discussion by medical men in northern localities where malaria was supposed to have been exterminated, but even the newspapers have considered it of enough general importance to refer to it frequently. It came to pass strangely enough, that a question that had settled down into a few fixed and demonstrable propositions, was thrown into such confusion that it was no longer sufficiently explicit to use the word malaria in conver-

sation or in writing, without qualifying it with such a prefix as "paludal," or "marsh" malaria, that one might be quite sure of the meaning intended to be conveyed.

Dr. Sternberg has entered upon his work with a full knowledge of the needs of the times, as will be seen by his introduction. He is not tempted by any of the new doctrines of the day to define malaria, nor even to say what it is more than "it is an unknown poison, of telluric origin, the cause of periodic fevers." Intermittence, he insists, is not peculiar to malarial fevers, and he quotes Sir Charles Murchison's list of twelve distinct diseases in which it is a symptom, and eleven of the diseases are not malarial. "What tests have we, then," of the evidence of malarial poisoning? "The present writer knows of none of universal application, unless the curative power of the cinchona alkaloids be accepted as such a test."

* * * "We must admit that this test is not reliable, or that fevers which do not yield to quinine have a different etiology from those which do." We think that Dr. Sternberg would be justified in emphasizing his proposed test with more assurance than he does; for practically what he states above is the position of a very large number of doctors whose lives have been spent in malarial regions. It is all but a universal practice among Southern doctors to commence the treatment of fever of undefined and doubtful character with quinine, and failing to make any impression in from four to six days by full doses, to abandon the antiperiodic expectations and look forward to a prolonged continuance. This practice, as servilely routine as it may appear, has its foundation in an experience, which recognizes that only a prompt antidote can save the life of some patients suddenly seized with fever, and no amount of prevision can designate which will and which will not be a case of profound malarial poisoning; and more than this, is based upon a conviction that quinine can be relied upon largely as a diagnostic as well as a therapeutic agent.

As the author says, the season of the year also furnishes a guide corroborative of other facts. The clinical thermometer and the time of day of the seizure also go far to convince the practitioner of the nature of his case. For instance, one familiar with the fevers of malarial origin would be doubly assured of his diagnosis if the seizure began any time between 11 A. M. and 3 P. M., and if he found the temperature rapidly reach 106° or higher, falling

rapidly by sunset or earlier. We believe that a picture of malarial fever can be so portrayed that it could never be mistaken for anything else, and that it is only a lack of sufficient experience at the bedside which has caused confusion.

The arrangement of this volume is simple. The introduction discusses the true meaning and application of the term malaria, and the effects, in general terms, of this poisonous agent.

The first chapter treats of "The Mode of Infection, or Intoxication," (?) and it is full of interesting matter as to the way of access of malaria, whether by the lungs, skin or stomach. The author says that in the absence of experimental proof he must still preserve his scientific skepticism about the communication of malaria through the medium of drinking water, although he admits that there is much evidence which appears strongly to sustain the view. The possibility of infection by drinking water has long ago been proven in some of the eastern counties in this State. In Edgecombe county, on a large plantation, the hands were supplied with water from a spring issuing from a marl bed. Many of them, although negroes, and notably unsusceptible to malaria, were seized with fever. During the progress of plantation work it was more convenient to get water for one part of the hands, from a cistern. The fever disappeared from all of those using cistern-water, and prevailed among those using the spring water. After two or three seasons of such experience the plantation was supplied with cistern-water, and malarial fevers ceased to be troublesome. This experience is corroborated in Wilmington, where the abandonment of marl-bed springs and surface-wells (the latter rendered necessary by the deepening of the Wilmington & Weldon Railroad cut, which enters the town from the north and east, to a level below that of the deepest wells), and the resort to cistern-water, abated the prevalence of malarial fevers to a great extent.

The Conditions Governing the Dissemination of Malaria, such as soil and vegetation, malarious plains, soil moisture, ground air, denudation of soil by destruction of forests, drainage, cultivation of land, vegetable decomposition, are all instructively discussed; and, also, conditions relating to climate, rainfall, ozone, winds, topography, include items of interest, many of which are new.

Knowing of the laborious researches of the author into the Klebs and Tomassi-Crudeli theories of the causation of malaria, the reader

naturally turns to the chapter on the "Speculations and Researches Relating to the Nature of Malaria," with unusual interest. This chapter can be fairly taken as a test of the ability of the author to cope with so vast a subject as the causation of malaria. We wish that the many young men who are exploiting so loftily in the discovery of "germs," could learn the lesson of modesty from this chapter, in these days, when so many theorists are claiming the discovery of "germs" by laboratory experiments, and building lofty structures of doctrine upon no surer foundation than the presence of microscopic fungus in the air and fluids injected and ejected. "The highest medical authorities in all parts of the world," says Dr. Sternberg, "while recognizing the fact that there is such a thing as malaria, generally concur in the statement that we know nothing definite as to its chemical and physical characters. This is the verdict of the older authors—Wood, Bartlett, Watson, Aitken and MacCulloch, and also of the more recent authorities—Hertz, Colin, Fayrer and others. The present writer regrets that he does not find himself in a position to give a more definite answer to the question, What is malaria?" The germ theories are severally rehearsed, and the chapter is concluded with the acknowledgment of ignorance as to the real nature of this widely distributed poison.

We are well pleased with this volume, but wish that the author had not yielded to the pressure of the publishers to hasten its preparation. We notice many parts which could have been elaborated with more care, but after all, it may not have been commensurate with the space allotted. The index, too, is not full enough, and could be enlarged with great advantage. We trust that Dr. Sternberg will continue the collection of material, and finally give us a volume of more comprehensive proportions, with more of his personal opinions and experiences, and less of that of European origin. The work, as it now stands, will be read with great interest by the profession, and makes one of the marked volumes of Wood's Library for 1884.

FIFTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF ILLINOIS FOR 1882.

This is a bulky volume of 632 + xlv pages. It is replete with matter of practical value not to be found elsewhere, and surely indi-

icates an energetic and able management of the States' trust, in the matter of State medicine in its broadest sense.

A very elaborate and minute report on "Medical Education and the Regulation of the Practice of Medicine" in the United States and Canada, being a revision of a former report on the same subject, occupies 202 pages. It gives pretty much all that could be desired to be known of statistics of physicians, their medical acquirements, their "school" of practice, the medical colleges, real and spurious, and all the laws of the several States regarding the requirements for the practice of medicine. The statistics of North Carolina are in some respects meagre, as only eleven students are recorded as being matriculants at the different medical colleges. Another error has for several years been repeated, that the University of North Carolina formerly issued medical diplomas, and gives one as being the number held by Illinois. If there is such a diploma extant it is not genuine, as the University of North Carolina has never issued a medical diploma.

The information brought together on the subject of medical education is very great, and will save all future compilers the trouble of searching the record. We wish that every member of the Legislature in this State could be induced to master the contents of this part of the volume.

The second division of the volume treats of "The Small-Pox Epidemic" in Illinois of 1880—'82. The editor of the volume, Dr. Rauch, very appropriately states that he uses the term epidemic in its popular and conventional sense, for small-pox can never strictly or accurately be called an epidemic disease. The Secretary is able to trace the introduction of small-pox in 1879, in Illinois, to an immigrant who arrived in Chicago in November of that year. The narrative of the spread of the disease from a known source is one of the many useful lessons we find here. This is supplemented by reports from nearly every county in the State where small-pox appeared, and giving peculiarities of the outbreak. A "Tabular Statement—Showing Sex, Age, Nationality, Occupation, Vaccinal History, Character of Attack, Duration of Illness and Result in 1,100 Cases of Small-Pox," is a most valuable record, and glancing over it it is astonishing to learn that 341 of the number had the confluent form of the disease.

The investigation of the subject of "Immigrant-Introduction of

Small-Pox" establishes, beyond reasonable doubt, that "the immigrant is a prime factor in the origin and continuance of small-pox in the United States," either directly in his own person, or through the medium of clothing or other effects. Hence the vigorous and well-timed efforts of the Illinois Board in thorough inspection, and the inauguration by that body of steps which were finally taken to inspect immigrants, from their arrival in ocean steamers, to their destination. It is perhaps the best piece of work done in this country in preventive medicine, and because it was the best it excited the jealousy of the Marine Hospital Service, and political measures were at once instituted in Washington, not only to suspend these inspections, but to make them serve as an argument that the National Board of Health was damaging commerce, and should therefore be abolished. This is one of the black pages in the record of the national sanitary work, and the country will be fortunate if it recovers from the blow for many years to come. But to return: The Illinois Board has great reason to magnify her record of the part taken in the suppression of small-pox. We trust that as honest and well-informed and unanimous work may be done by the successor of the National Board when cholera reaches these shores. There is no disguising the fact that the Marine Hospital Service has not the skill to unite the sanitarians of the country, and without this its work must be to little purpose.

The Fifth Annual Report of the Illinois Board of Health is worthy of a place in every medical library; but we are not aware if it may be obtained by those desiring it. Letters addressed to the able Secretary, Dr. John H. Rauch, Springfield, Illinois, will elicit a reply.

MEMOIRS OF LIFE AND WORK. By CHARLES J. B. WILLIAMS, M.D., F.R.S. London. 1884.

The elders of the profession will doubtless thank the reviewer for calling their attention to this autobiography. It is of a rare man, whose professional works are well-known to the passing generation, at least. It is of a remarkable life—a professional life spanning over sixty years—and linking together the profession of a time when it was in its infancy of clinical learning, to that of a successful proportionately developed science and art. Dr. Williams began his medical career at Edinburgh, graduating from the University in

1824. His professors were Dr. John Thompson, Dr. Andrew Duncan, jr., Dr. Hope, Dr. James Hamilton, Dr. Home, Dr. Monro, *tertius*, Dr. Duncan and Dr. Christison, names which carry us back to a very distant day.

Dr. Williams' early home education seemed to fit him preëminently for the pursuit of original studies, for as a boy, at home, he had constructed an electrical machine and a battery of Leyden jars, a voltaic pile, several little telescopes, microscopes, kaleidoscopes and æolian harps. His entrance at the Medical School at Edinburgh seems to have been his first view of the outside world. From Edinburgh he went to Paris at a time when Laennec and Andral, Gay-Lussac and Pouillet, Esquirol and Guersent were teachers. Dr. Williams entered at once into the study of the physical signs of disease at the bedside, under the eye of the great master Laennec, he attained to that proficiency which laid for him a foundation of the work which has made his name known among medical men everywhere. He brought back with him to his native country a degree of enthusiasm and accurate knowledge of auscultation and percussion, far in advance of the generation of doctors then at the height of their fame in London. In 1828 he published his first book on auscultation, in which he set forth the acoustic principle upon which the various sounds of the thoracic viscera, described empirically by Laennec, were based. From this first literary venture up to the time he published conjointly with his son, Dr. C. T. Williams, a work on consumption, his writings commanded the respect and confidence of the profession. His work entitled the "Principles of Medicine" was, up to the time of the last edition of 1856, a reliable text-book in this country, entirely unique, and far in advance of anything then taught upon the phenomena of inflammation. Dr. Williams was so far original in the production of the great bulk of matter connected with these processes that Dr. Druitt wrote to him in 1872 that "twenty-five years ago you were twenty-five years in advance of the time."

As we read page after page of this entertaining volume we hardly know which most to admire—the life devoted to duty, public and private, or the faithful and persistent prosecution of original studies; but surely we have here a life in which duty to professional work, devotion to religious principles, and a broad philanthropy, extending over a period seldom allotted to men, is narrated in a manner so

guileless as to convince the reader that this is one autobiography worth writing.

It must interest those whose memory extends back to the days of Baron Larrey, Louis, Majendie, and others of that brilliant generation. A remark made of Louis by Dr. Williams put him in rather a different light from that usually awarded him: "In the same ward we often saw a tall, solemn man, with spectacles, diligently taking notes alone, not accompanying the physician. This was M. Louis, collecting materials for his elaborate work on phthisis, which established his reputation for statistics; these he held to be the only proper basis of medicine. In that line he became famous; but he was equally remarkable for the gloominess of his predictions and the inefficiency of his practice." All through this volume the writer expresses his impressions of men with great candor, but always with kindness.

But we did not intend to write a review, but merely to say to our elders, if they want to make an excursion into the delightful past, they will not regret having been made acquainted with Dr. Williams' autobiography.

THE NATIONAL DISPENSATORY. Containing the Natural History, Chemistry, Pharmacy, Actions and Uses of Medicines, etc., etc. By ALFRED STILLÉ, M.D., LL.D., and JOHN M. MAISCH, Phar. D. Third Edition. 311 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1884. Pp. 1,755.

The professions of medicine and pharmacy in the United States are well off in the possession of such a work as the one we have before us, now so well known in this country and abroad.

At last the time-honored "*Absinthium*" has been displaced from its alphabetical position at the head of the list, by the new drug "*Abrus*." Nothing better exemplifies the thorough revision of this volume than the promptness with which new remedies have been introduced, and this not only in name, but by a thorough and systematic description. This one instance will, furthermore, serve to show that the authors have not confined themselves to the articles of the Pharmacopœias, but have recognized the necessity of describing all drugs and chemicals which are of sufficient importance to be of interest to the two professions.

The minuteness and accuracy of the description of the Origin,

Properties, Tests, Pharmaceutical Uses and Allied Plants or Preparation, is characteristic of the able pen of Prof. Maisch. His research in botanical subjects is very exhaustive, and his botanical descriptions are plain, and beautifully elucidated in many instances by exceptionally well executed wood-cuts. One feature of this volume, which should make it very attractive to the student, is the section on allied substances. For instance, under the head of *Belladonna*, the allied plants are briefly described, both as to their botanical and therapeutic analogy. The two plants mentioned are *Atropa Mandragora*, Linné, and *Scopolia Japonica*, with such information as to be a guide in pharmacognasy, and also sufficient to suggest a direction in which to pursue further investigation.

The sections of roots and the minute details of leaves, seeds and other articles, was a marked feature of the first edition, but the present work is far more faithfully done, and this is as high praise as could be bestowed on any work.

The representation of a *Drosera* we hardly looked for in a work so thoroughly practical in all of its details, for, as a remedy, this little plant scarcely made a ripple upon the stream of therapeutical fashion. We were no little surprised to notice that a drug so well known, and so largely employed by the medical profession as *Rhamnus Purshiana* should occupy so little space, and in the subordinate section of plants allied to *Rhamnus frangula*. Notwithstanding that Frangula is official, it is safe to say that it is a drug which has taken but little hold in American practice, whereas Purshiana has found its way into the confidence of a very large proportion of the profession.

Of the therapeutical portion of this volume there will be a large diversity of opinion. Prof. Stillé is a therapist of known ability. He is a writer of strong convictions, founded upon large and varied observation. That he belongs to the old school of therapists does not mean that he deals in obsolete opinions. A glance here and there at the leading topics shows how carefully he has weighed the matter he presents to his readers. His note of warning against digitalis in typhoid fever, his disbelief in veratrum viride as a substitute for the lancet in certain diseases, his doubt as to the employment of jaborandi in dropsy as an agent superior to serous evacuation, are all given with no uncertain sound. It would hardly be possible to convey to the reader a just idea of the therapeutical

learning collected in this imperial volume, only those readers who know Dr. Stillé's ability will be prepared to find such stores of facts of the most recent date, written in clear and elegant language. In these days of multiplied special works on therapeutics, the Dispensatory has not been so much consulted by physicians upon this department; but with the appearance of this very complete work, we have no doubt that they will return to the old habit of having it near them as a reference book.

Taken altogether, the National Dispensatory is a volume of which every American medical man must be proud, for it surely marks an era in American medical and pharmacal literature as the classic work of Jonathan Pereira did for English medicine. The highest style of the printer's art has been employed in the production of this work, and as a book of reference it is difficult to conceive how it could be made more attractive.

TRANSACTIONS OF THE SOUTH CAROLINA MEDICAL ASSOCIATION.

Thirty-fourth Annual Session, held in Florence, South Carolina, April 22-24, 1884. Charleston, 1884. Pp. 131.

We have just received the above volume, although some of the papers have been read, through the courtesy of our friends who have sent us advanced sheets, some weeks ago. We intended then to give our readers an abstract of some of the papers, but it was finally delayed until now. This Society has on its list of membership 142 permanent, and 6 honorary members. Its meetings are annual. Its working committees comprise the Executive Committee of the State Board of Health, besides the usual committees common to such societies. The Society therefore is in fact the State Board of Health. The address of the President, Dr. R. A. Kinloch, of Charleston, was "*A Plea for Education as the Means for Unifying the Profession and Strengthening the Association.*" We make on another page a rather lengthy extract from this earnest and well-timed address, because it is so truthful to the condition of things in our State, excepting the reference to the necessity of a Board of Medical Examiners. The captions of the other papers are: "Hypodermic Injection of Morphia in Convulsions of Children," by Dr. John I. Hughson, of Sumter; "A Case of Ovarian Dropsy, followed by Recovery, with remarks on Recent Advances in Abdominal Surgery," and "Paraceutesis Pericardii, with Complete Recovery," both by Dr. Cornelius Kollock, Cheraw; "Progressive

Myo-sclerotic Paralysis," and "The Use and Abuse of Cathartics," both by Dr. Thomas Legare, of Charleston; "The Sanitary Use of Plants and Flowers," by Dr. James Evans, of Florence; "Bichloride of Mercury as an Anti-ferment and a Means of Destroying Sarcinae, etc., in the Treatment of some Gastric Affections," by Dr. James C. Wilcox, of Darlington; "On the Medicinal Properties of the Chalybeate Water of the Rawley Springs," by Dr. F. M. Robertson; "Pelvic Peritonitis and Cellulitis," by Dr. O. B. Mayer, jr., of Newberry; "Epidemic Continued Fever," by Dr. Thomas J. McKie, Woodlawn; "Diphtheria as Observed and Treated in two Sections of York County, in the Year 1882," by Dr. W. T. C. Bates, Columbia; "Septicæmia from the Bite of a Rat," by Dr. John M. Thompson, of Newberry; "Severe Abdominal Wound and Recovery," by Dr. J. C. McMillan, Marion.

The Society appears to be in active progressive condition, and the literary work of good quality.

Dr. A. A. Moore, of Kershaw, is the President, Dr. H. D. Fraser, of Charleston, Corresponding Secretary, and Dr. John Forrest, of Charleston, Recording Secretary.

JOURNAL OF THE ELISHA MITCHELL SCIENTIFIC SOCIETY for the year 1843-'84.

We welcome with unusual pleasure the first fruits of this young Society. The President, Prof. F. P. Venable, opens with his report, which shows that the Society was founded with the idea of "arousing an increased interest in scientific work, the building up of a spirit of research, the encouraging of those already at work and the advancing of our knowledge of the State and its resources." The Society now has upon its roll of members the names of 7 life members, 77 regular members and 74 associate members—156 in all.

The sketch of the life of Dr. Elisha Mitchell, after whom the Society is named, is appropriately illustrated by a steel engraving of him. The article is from the pen of Prof. Charles Phillips, and worthily portrays the life of the first resident scientific teacher in the State.

The other articles are on various subjects: "Decomposition of Potassium Cyanide," when used by Entomologists; "Reversion of Phosphoric Acid by Heat," etc., and "Rate of Reversion in Superphosphates Prepared from Red Navassa Rock," and "North Carolina Phosphates," all by Dr. W. B. Phillips chemist of the Navassa Guano Works

"North Carolina Phosphates," by Dr. Charles W. Dabney, jr. ; "Notes on Indian Burial Mounds," by Prof. J. A. Holmes ; "Notes on Cassitente" (a tin-yielding ore from Kings Mountain), by Dr. Charles W. Dabney ; several articles of observations on storms. All of the subjects have not been enumerated, but enough have been given to show the wide range of scientific topics undertaken.

The *Journal* makes a good beginning, and we are sorry to see many gross typographical and other errors. For instance, "Yeopon" for *Yaupon*. p. 85 ; "stratas," p. 64, *Pinus stobus*, for *Pinus strobus*, p. 87 ; several bad blunders in the list of plants, pp. 46-47.

It is evident that science is making acquisitions of the young blood of the State, and we trust that the next Legislature, instead of taxing the very few scientific instruments in the State according to the present law, it may offer a bonus to *true scientific work*. But whatever the Legislature may do, the good work of science is in the hands of enthusiastic men, who expect no reward but the consciousness of work well done.

EXTRACT OF GOSSYPIUM.—Dr. W. C. Bellamy, in the *Southern Medical Record* (August), says that the inertness of the extract of the cotton plant is due to the fact that the commercial extract is prepared from the dry roots, whereas the virtues only reside in the green root. Some of the extracts in the market have the proper color, but only very faintly the proper odor.

THE CARE AND FEEDING OF INFANTS is the title of a handsomely printed pamphlet, with a delicately engraved cover, setting forth the value of Mellin's Food for Infants. Actual experience with the article is of far more value than chemical analyses, and it has stood the former test for several years. When we look back upon the devices for suitable diet for children in vogue several years, and see how crude they were and how troublesome in preparation, the high value of Mellin's Food will be appreciated. Chemical analysis rightly enough shows the analogy of this article to be the best and most assimilable food, but more than this, fat babies, brought up from death's door by its aid, is far more convincing to the consumers—and these are to be seen in every community where it is used.

CURRENT LITERATURE.

EXTRACTS FROM AN ADDRESS BY PROFESSOR R. A.
KINLOCH, M.D.

EFFECTS OF THE WAR ON THE PROFESSION—WAR DID NOT MAKE GOOD
SURGEONS—PHYSICIANS ENTICED INTO OTHER PURSUITS—A PLEA
FOR THE EARLY TRAINING OF PHYSICIANS.

* * * * * * *

In looking for causes which may have operated against the success of our Society, outside of the organization itself, I cannot fail to note with sadness the results of war and poverty upon the State. "Every heart has its own sorrow." God forbid that I should be considered as indulging in harsh criticisms, or in hasty and unjust animadversions upon the action of any brother who, for good and sufficient reason, has failed to respond to the call of the body in its work of usefulness and benevolence. The abolition of slavery, one of the consequences of our war, brought of course poverty in the sense usually attached to this term, but it affected our profession in a far more serious manner, inasmuch as it swept away not only professional income, but a wide field for professional culture and experience. I will not discuss the moral aspect of this revolution in our social fabric, nor must I be understood as affirming that such revolution resulted, or will result, in ultimate and permanent detriment to professional interests. As to its deteriorating effect upon the *status* of the profession for many years, I feel quite confident. I know of what I speak when I say that, by the change referred to, numbers of our brethren were shorn of their usefulness and reluctantly driven into other pursuits. The "*res angusta domi*" admitted of no compromise. Good minds and good associates were thus lost to us. The school amidst slavery was a valuable one. The young physician had an early opportunity for acquiring confidence, tact, wisdom and ripe experience. Thus was kept alive his interest in the profession, and through this schooling there was reached a high order of development. With but limited education, without the *entrée* into populous cities or well endowed hospitals, new remedies

were introduced, true portraitures of diseases made, useful appliances invented and novel and brilliant operations in surgery performed. And may we not claim, as I have upon another occasion ventured to suggest, that it was by the opportunities of this field of labor that one of our honored fellows, so recently deceased, was emboldened to attempt the establishment of a new department of medicine, and to force from the world the recognition of himself as the father of American and of Modern Gynaecology? In the culmination of his greatness, at the courts of most potent monarchs, and in the palaces of emperors, he remembered full well the rich opportunities which he had not neglected in the squalid hovels of his distant and ever loved Southern land.

“God moves in a mysterious way
His wonders to perform!”

The school that I have referred to was richer in advantages and more prolific in results than the one instituted by the bloody war that swept it away. The experience in military surgery was large, but the benefits to the profession of our State have not, in my view, been abundant or lasting. I see, as a result, no good surgeons or physicians who were not trained or skilled before. The experience in the field or the camp is not the calm experience of civil life, and many beginners were led to erroneous conclusions from ernde data. Our Southern military hospitals, for obvious reasons, were not good schools. To one who knows how to put a proper estimate upon the military experience I am alluding to, the boasted claims of numerous pretenders do not speak well for the good standing of some of our *confrères*.

Necessities engendered apart from war have also driven or enticed physicians into other pursuits, and thus detract from our strength. With varied and forced occupations, as before suggested, the love of the profession has waned, or at least the followers of it have no time to battle for its interests. Good minds have been lost to us because of more profitable offers. The resources of our State and country have been in latter years more actively developed, hence new interests have sprung up and more varied employment been accepted. Commerce, trade, manufactures and mining are yearly more and more usurping labor. As a modern writer puts it, “A mercantile phase of civilization encroaches by its principles and

methods." Our profession feels this influence in lessened numbers. But this is not the worst evil. This encroachment annoys us with numerous half-way doctors. Where it fails to seduce from our ranks, it entices to mixed and quicker ways of support or money-making. The profits of a drug shop cannot be resisted, and a physician with a diploma soon does most of his practicing from behind his counter. He dispenses all popular nostrums to the eager people; he makes money, and so satisfies his sentiment. The educated druggist or pharmacist naturally follows the example of his recognized superior, and deviates from his proper sphere by playing the doctor. Another physician, perhaps possessing the promise of future professional usefulness, degenerates into a travelling agent of some newly fledged insurance company. The necessity of science to the arts takes from us many well-trained minds capable of adorning the profession, if the profession could reward them for such a benefit. Agriculture likewise thins our ranks when cotton pays better than physic. And, worse than this, so do politics, when alas ! a poor State has suffered great upheavings, and the dregs of society thus disturbed, tend for a time to float upon the surface. Without disparagement of worthy members of our profession, who at times have found it expedient to enter the councils of the State, and who have been enabled thus to serve our noblest objects, I beg to be delivered from a political doctor. It may be somewhat comforting, after a full review of all the agencies by which our Society has seemingly been depleted, to remember that, whilst we have lost good elements, we have been saved from evil ones. Under modern views of pathology, we must be cheered by the knowledge of the fact that our escape from some few micro-organisms of a certain type has saved, thus far, our corporate body. And with a sound body, however small, we need not despair. Let the dead past and the critical present be forgotten, and let us with brave hearts look to a coming future. With a clear comprehension of our situation, renewed and increasing energy must develope a brighter day.

"If we see better now, we are
 Already winners just so far;
 And merely ask to keep our winning,
 Wipe out loss, for a new beginning."

In view of such a new departure, I would again plead for educa-

tion. I insist that this is the essential for unifying the profession, as it is the need of this Association for securing working members, and becoming substantial in all its parts. "Instruction is the regulation of the pathway of duty." King Frederick William III., of Prussia, in his address at the foundation of the University of Berlin in 1867, frankly depicted the situation of his country by saying: "We have been humiliated and depressed in every respect, our country is ransacked and impoverished, our population reduced to nine millions." Then he bravely added: "We must try to gain what we have lost in material strength by the development of mental power." The thought of the great monarch took wings and spread over Germany. Instruction in the schools became the watchword. There followed the Franco-Prussian war, which was "decided," as was proclaimed in 1871, "by the German schoolmasters. (Address of Dr. Knapp, of New York.) To compare small things with great, mental power, my friends, is as necessary to strengthen and redeem this Society as it was to elevate the German people.

I. First, in looking to our future good, we must begin with the early training of those to come after us. Let every member of our Society be a medical schoolmaster for medical men to come. But let us, as well, agree not to assume this office unless the student of medicine comes to us with a proper academical training. Let us consider, at the very beginning, that he is to be educated, not for our personal advantage, but for the future life-blood of this Society, and for the gain of a noble calling. You will thus strike the most effective blow against the system which would flood the land with ignorant physicians. You will thus check the most nefarious course of the colleges which receive students without regard to any preparatory qualification, and consider them objects to be bid for. Next, by careful office instruction and examinations, now too sadly neglected, you can easily give the mind of the student its proper bent, and incline him to that correct view of education which will render him most useful for the needs of the people of our State.

When there existed the single college organization in this country, represented by the University of Pennsylvania, there was required for admission a fair standard of education, including a knowledge of the classics and a full acquaintance with the natural and physical sciences. Now, but few colleges in our land exact any

preliminary training. To the honor of our State let it be known, that the matter of the better education of the medical student was the subject of warm discussion in the Medical Society of South Carolina as early as 1835. This was long prior to the manifestation of interest in the subject which finally led to the formation of the American Medical Association. After fifty years, my friends, should it require any pleading on my part to elicit like interest with you, the present representatives of the profession of our State? I trust not. It will be unnecessary for me to offer any scheme of preliminary attainments to be insisted upon. I would rather leave this to your better judgment. All that I would urge is, that you take action here to-day, and pledge each member of this Society to the institution of reform in this matter of vital interest. By the prompt action of a judicious committee you can soon determine the minimum degree of education which, from this time forward, will render any youth of the State eligible to begin, with one of our members, the study of our profession. I am glad to be able to note the fact that other societies have moved in this direction. The Trumbull County Medical Society of Ohio, at its meeting January 31, 1884, adopted a series of resolutions covering the ground in question. These provide for a board of examiners, appointed by the Society, to decide upon the preparatory education of every student desirous of entering the office of a member of the Society to study medicine. This Ohio Society went further and resolved that the time of study required by its members should be five years, including lectures. And, very early, I would have each preceptor in our State impress upon the mind of the student that he must obtain such knowledge of the several branches, or departments of medicine, as will fit him for the work of a *general practitioner*. In our sparsely settled State this general knowledge alone can meet the need of the people. Moreover, the vast amount of the professional work, everywhere in this country, is done by the general practitioner. Specialists come in exceptionally, for work demanding peculiar nicety; and then we find that such practitioners succeed best who have, as well, a good general knowledge of the broad principles of pathology and therapeutics.—*Copied from Transactions South Carolina Medical Association.*

FOTHERGILL ON SOME NERVOUS DERANGEMENTS OF THE HEART.

In the *Lancet*, June 1884, p. 1068, Dr. Milner Fothergill divides diseases of the heart proper into—1. valvular; 2. muscular; and 3. nervous. It is with the nervous affections of the heart that the paper chiefly deals, and the first of these is pure intermittence—a halt in the usual rhythmic stroke of the ventricles. It is very commonly met with in old or elderly men, and, if associated with organic disease, may occasion groundless alarm. It is a mere disturbance of rhythm, and, as far as our present knowledge goes, has no significance, unless found with other signs of degenerative change; then it has a significance, which, however, is borrowed from them, rather than furnished by itself. When intermittence is increased by effort, then it is well to examine the condition of the circulatory organs. When it is found with irregularity of rhythm, and this becomes more pronounced on exertion, the author states that then it is nearly certain that there is something more than a mere “neurosal halt.” Another common neurosal disturbance of the heart is palpitation. Nocturnal palpitation is common in women at the menopause, where there is a suspicion of gout. In some cases it is brought on by coitus, in others it may be relieved by the sexual act. Palpitation may be set up by some abnormal condition existing elsewhere. A displaced uterus may be the provoking cause; and until the organ is once more in its normal position, little relief is obtained from treatment. At p. 1112 he describes a form of neurosal derangement of the heart which he terms “the badly behaved heart.” It is mostly met with in women; the heart’s action is persistently and continuously tumultuous, and there is a great deal of actual palpitation at times, with intervals when the heart’s action is quieter, but never calm. The author concludes by drawing some broad distinctions between organic disease and neurosal affection of the heart. Organic change reveals itself in two ways; (1) by signs discoverable upon physical examination, and (2) by physiological indications of the effects of effort—as shortness of breath upon exertion, for instance. In neurosal affections there are no such evidences; the heart on examination is found normal except there is some perverted action. In the “irritable”

heart, however, there is a certain amount of inability to bear any strain. The author lays stress on the statement that a neurosial affection of the heart never develops into organic disease as a process of development.—*London Medical Record*.

“HUMANITY’S BONFIRE.”

Of the many sensational headings in which transatlantic newspapers allow themselves to indulge, that of “Humanity’s Bonfire,” which figures in the *Indianapolis Herald*, is not the least curious. The occasion of it is the destruction by fire of the instruments of restraint in use in the Indianapolis Asylum, of which Dr. W. B. Fletcher is the medical superintendent. A pile, twenty feet high, we are told, composed of cribs, fetters, halters, straps and other mechanical means of restraint, was the material for an imposing bonfire, which the doctor invited his friends to witness. In terms as glowing as the fire itself, the narrative tells how, “in the presence of the rejoicing inmates and visitors, the torch was applied to the hideous pile, and the implements of restraint were consumed.” The superintendent addressed the patients in terms of kindness, and they in their turn cried and shouted for joy, and blessed their benefactor. Prayer was offered by a clergyman. Major Gordon congratulated the asylum-managers on the event, and predicted a similar movement in prisons. The Rev. Oscar McColough said the first great fire in the world was the burning the Pope’s Bull by Luther; the second, the burning of the Bastile; while the third was the burning of the instruments of restraint by Dr. Fletcher. The asylum closed these extraordinary services by singing the doxology. So far as this proceeding is an indication of a more humane treatment of the insane than that which obtains in some of the American asylums, we rejoice at it; but the account reads a little too much like a spasmodic effort to introduce a better system without a logical consideration of the whole bearings of the subject of the non-restraint of the insane. Every one knows that there are occasionally cases in the best conducted asylums, in which mild forms of restraint are the kindest modes of protecting the patient from injuring himself

and others. The correct discrimination of such cases is not aided by fanaticism, nor yet by "Humanity's Bonfire," however excusable it may be, regarded as a reaction from an intolerable amount of cruel restraint such as appears to have existed at Indianapolis.

MARAGLIANO ON ANTIPYRIN, A NEW ANTIPYRETIC.

A new synthetic alkaloid, belonging to the group of chinoline derivatives, has been formed by L. Know, of Erlangen. Professor E. Maragliano reports, in the *Italia Medica* of June 5, the experiments made under his direction with this alkaloid. He finds that the most sensitive reagent is "iodurated potassium iodide," which will show one part in 100,000. In examining the urine for it, it is necessary to acidulate it with sulphuric acid. Taking 5 c. c. of urine, he adds 5 drops of sulphuric acid, or more if the urine be alkaline, until the carbonates are saturated. If the urine be turbid it is filtered, and then 10 drops of the iodine reagent added. If antipyrin be present, a reddish-brown precipitate is obtained. A slight reaction is obtained three hours after the administration of the drug; after four hours the reaction is marked, after twenty-four hours the same, and after thirty-six hours is still perceptible. Antipyrin was given to apyretic and febrile patients, in doses of one to three grammes at intervals of one to three hours. It gives rise to no general symptoms, and rarely causes vomiting; the frequency of respiration is not modified. The pulse is always diminished in frequency, sometimes conspicuously so. Arterial pressure is unchanged, or slightly augmented. The normal temperature is not affected. In apyretic individuals it causes a slight dilatation of the cutaneous vessels, often scarcely noticeable. In pyretic individuals the dilatation is more energetic and accentuated. This dilatation somewhat precedes the fall in temperature, which is accompanied by sweating. In doses of 50 centigrammes given in one dose, it generally causes a fall of three to four-tenths of a degree (Centigrade) after two hours, but this fall does not last. In doses of 1 gramme the fall commences after one hour and increases

during five or six hours, and reaches even 3° C. A more rapid fall follows a dose of $1\frac{1}{2}$ gramme, which may amount to 2° or 3° after seven hours. A dose of 2 grammes causes a fall of $0^{\circ}.8$ to $0^{\circ}.3$ in one hour, and lasts longer than the fall caused by the $1\frac{1}{2}$ gramme. Antipyrin in repeated doses exerts its antipyretic action for six to fifteen hours, and it appears that this may be extended to forty hours or more. Phthisical patients who took antipyrin in this manner not only lost the fever for that day, but for the one or two days following, the fever becoming tertian or quartan instead of quotidian. Antipyrin from these experiments seems really to possess energetic antipyretic properties. Its immediate antipyretic action in equal doses is less than that of kairin, but it has the great advantage of extending its action over considerably longer time.—*London Medical Record.*

STRAHAN ON HYPODERMIC INJECTION OF AMYL FOLLOWED BY EPILEPTIFORM CONVULSIONS.

Dr. Sydney Ringer has noticed the occasional action of the nitrite of amyl upon the heart, and the strange effect sometimes produced upon the nervous centres. He says: "I have seen one case where a woman immediately after a drop dose turned deadly pale, felt very giddy, and then became partially unconscious, remaining so for ten minutes." And again: "A delicate woman, after one-thirtieth of a drop, passed in a few moments into a trance-like state." In a case described by Dr. Strahan (*Journal of Mental Science*, July) a chronic maniac, aged 53, had suffered for several days from severe lumbago; a ten-minim dose of a 10 per cent. solution of nitrite of amyl in rectified spirits was injected hypodermically. "Immediately after the injection the pain disappeared. He got up from the bed, and at my request stooped and touched the floor with his fingers. In, as nearly as could be guessed, about a minute and a half, he suddenly became deadly pale, and sank back upon the bed." Then his face, head (bald) and neck became congested, and he was strongly convulsed for about half a minute.

The convulsion affected the face and arms strongly, the legs slightly. The teeth were ground, and the breathing was suspended. In a few minutes, after coming out of this fit, he was attacked by a second one, during which the heart's action became very faint. He was made to inhale some chloroform, and the fits did not return. The lumbago entirely disappeared. This observation is interesting, as inhalations of nitrite of amyl have been recommended, both in this country and in Italy, to check the recurrence of epileptic convulsions.—*London Medical Record*.

JENNINGS ON RESUSCITATION OF THE NEWLY BORN, AND ON THE TREATMENT OF POISONING BY AESTHETICS.—Mr. C. E. Jennings, in the *British Medical Journal*, April, 1884, p. 809, draws attention to the necessity of forcible traction on the tongue, as a preliminary to artificial respiration in the newly born, and also in cases of threatened death from anaesthetics. Mr. Jennings narrates a case where he was performing artificial respiration on an infant, when he noticed that the chest could not expand, since the air, immediately on entering the larynx, forced the epiglottis like a valve over the superior orifice of the organ. No one being near who could be trusted to hold the tip of the child's tongue, a darning-needle was threaded and passed through the tongue; forcible traction was then made on the loop of thread, whilst artificial respiration was recommenced. Animation was rapidly reproduced, vanishing on relaxation of the tongue, reappearing at once on the renewal of traction. If death appear imminent from causes other than laryngeal obstruction, only one method remains which can possibly avert dissolution—namely, the intravenous injection of fluid (medicated or otherwise), accompanied, under most circumstances, by simultaneous depletion.—*London Medical Record*.

AGUE IN THE FÆTUS.—Dr. Albreeht, of St. Petersburg, reports two cases of ague in the seventh month of uterine life. In each case the spleen was enormously enlarged, and very hard and brittle. Both mothers had attacks of ague. The detection of motionless spirochetæ in in case confirmed the diagnosis of ague.

THE TASTE OF MEDICINE.

The discussion of the desiderata of the new British Pharmacopœia opens up some practical matters it would be well to consider. Dr. T. Lauder Brunton (*British Medical Journal*) calls attention to the fact that the taste of preparations should be duly considered. The mere prescriber has no means of knowing how his prescription will taste, and the man who dispenses his own medicine has the advantage. He believes that the success of homœopaths is due to their palatableness. "In the last edition of the *United States Pharmacopœia* an attempt has been made both to render old-fashioned remedies more pleasant to take, and to introduce more agreeable forms of medication. Thus Dover's powder is directed to be made with sugar of milk instead of sulphate of potash, milk-sugar being quite sufficiently hard to break up and divide the ipecacuanha which the powder contains, and being at the same time free from the disagreeable taste of the sulphate." He speaks also of the advantage of the introduction of *abstracts*—powerful drugs diluted with sugar of milk, and also of the "elixir" as a vehicle for unpleasant medicines. He thinks it would be well to follow the example shown in this respect by the United States; and, he adds, "unless something be done to render it easier for medical men to prescribe mixtures which shall be palatable as well as active, the sale of proprietary medicines is, I fear, likely to increase rather than diminish."

Our British friends, always slow to see anything good of United States origin, seem to have paid more attention to the new Pharmacopœia than many of us at home.

DEATH OF CONHEIM.—Medical science has met with a great loss in the death of Professor Conheim. He died of gout on the 14th of August, and was in his forty-third year. His revival and demonstration of the discovery of Addison and of Waller, of the diapedesis of white blood-corpuscles, marked an era in pathological research. At his death he was Professor of Pathology in the University of Leipzig. Probably no name of modern times has been more frequently or admiringly quoted than that of Conheim.

OIL OF TURPENTINE FOR DIPHTHERIA.

It is to Germany that we are indebted for this efficacious and simple treatment, which consists of large doses of oleum terebinthinae rectificatum. Different writers have highly extolled it and ascribed to it actions which seem almost miraculous.

It would appear that scarcely half an hour after its administration a bright scarlet tint begins to encircle the diphtheretic exudation, gradually increasing in size, at length it completely envelopes and replaces the false membrane.

Authors who have been liberal in their praises, affirm that within twenty-four hours after the ingestion of the remedy the disease has wholly disappeared, leaving hardly a trace.

The treatment, however, seems to be attended by such marvelous success and promptness of effect only when the disease is in the first stages; nevertheless, even after the disease has existed for several days, it exerts, though not as promptly, a decided curative action and hastens the ultimate recovery. The dose, which is best given immediately after meals and in a little warm milk, ranges from a teaspoonful for children to a tablespoonful for adults, morning and evening.—*Journal de Thèrap.*

PROF. PARVIN says: "While there is no single plan of treatment applicable to all cases of placenta prævia, in general, this treatment may be comprehended in the alliterative phrase, Temporize, tampon, turn. Temporize if the hemorrhage be not so great, and the pregnancy not near its end. Tampon if the hemorrhage be severe, and the os not sufficiently dilated for immediate delivery; but let the tampon be so applied that the hemorrhage will be surely stopped and that dilatation of the os may be effected. Of course, a tampon can be most effectually applied if the perineum be drawn back by a Sims' speculum, and the os can be best dilated by a sponge-tent, or by means of Barnes' dilators, and these are to be preferred. If you use a vaginal tampon, do not soak the material

in any astringent solution, for it is not by coagulating blood, but by pressure you hope to arrest the flow. Of course, position is important, and you may also give cold acid drinks ; opium and stimulants may be required if there be pain and prostration. Finally, turn—turn, because very often in placenta prævia the fœtus is transverse ; turn, because when you bring the legs and then the thighs into the os uteri, you have a most effectual tampon ; turn, because you can thus, as a rule, most quickly effect delivery ; and the great dominating principle in the treatment of placenta prævia is, that when the hemorrhage is grave, end the pregnancy as soon as possible, both for the safety of the mother and the safety of the child.”—*College and Clinical Record.*

DR. CORY'S EXPERIMENTS IN VACCINATING HIMSELF FROM SYPHILITIC CHILDREN.

The following abstract of a report by a committee, consisting of Dr. Bristowe, Dr. G. M. Humphry, Mr. John Hutchinson, and Dr. Ballard, is taken from the *Supplement of the Twelfth Annual Report of the Local Government Board* (1882-'83). Dr. Cory's object in experimenting on himself was to test a current belief that vaccine lymph taken from a syphilitic person, if unmixed with the blood of the vaccinifer, does not contain the syphilitic virus, and is incapable of imparting syphilis by its inoculation. The particulars were obtained by the committee from notes reported by Dr. Cory, and from inquiries made by themselves. The first experiment was made in 1877 or 1878. The vaccinifer, aged eight months, was considered by Dr. Cory to be unquestionably syphilitic, but had no obvious signs of active syphilis at the time. The lymph was taken on the eighth day from vesicles normal in appearance, but delayed in development. Dr. Cory vaccinated himself in one place above the left wrist, particular care being taken to avoid the admixture of the blood with the lymph. Vaccinia followed but no syphilis. Second experiment November 5, 1879. The vaccinifer, male, aged eighty-five days, had active symptoms of syphilis, had been under

mercurial treatment for four days. The lymph was taken on the eighth day from good vesicles, with great care to avoid admixture of blood. The result was unsuccessful, both as regards vaccinia and syphilis. Third experiment May 11, 1881. The vaccinifer, a male, aged four and a half months, had no signs of syphilis when six years old, but at the age of three months had roseola and mucous patches. Rapid improvement took place under mercury. The lymph was taken from normal vesicles on the eighth day, and, as before, with the greatest care to avoid the presence of blood. Neither vaccinia nor syphilis followed. Fourth experiment July 6, 1881, by Mr. Haslam, at Dr. Cory's request. The vaccinifer, a female child, aged eighty-four days, soon after birth, had had "thrush," and, when ten days old, "snuffles." At the age of four weeks an eruption appeared on the arms, and was still present when the experiment was performed, at which time there were also a sore on the right buttock and a sore in the left nostril. There were five vaccine vesicles on the child's arm, normal in appearance, and not inflamed. The immediate neighborhood of the vesicles was free from the syphilitic eruption. Dr. Cory took the lymph on an ordinary lancet. The first vesicle which was opened bled. The lancet was then wiped clean and another vesicle punctured. This did not bleed. Lymph exuded spontaneously in a bead, from which Dr. Cory charged the lancet without pressing the vesicle. The lancet was only charged once. Dr. Cory then handed the charged lancet to Mr. Haslam, who vaccinated Dr. Cory in three places on the front of the upper part of the left forearm. July 7 the three places were red with small areolæ, which were declining next day. Six days later they were quite healed. The vaccination was unsuccessful. July 26 (21st day) Dr. Cory observed that two of the places (probably those last vaccinated) were red, and each formed a small red papule. These papules grew slowly until August 4, when the upper one began to desquamate, and when the scab fell from its centre this appeared slightly moist. The papules now grew more sickly, especially the upper one, and occasionally a slight areola appeared around each. August 8 a little yellow spot appeared in the centre of the upper one, and by the next morning a scab had formed over it. The lower papule was also growing more rapidly. August 11 the scab was removed from the upper spot and a little ulcer was

revealed. The lower papule remained dry. Dr. Cory now showed his arm to Dr. Humphry and Mr. Hutchinson, both of whom considered the spots to be syphilitic. At Dr. Cory's request both spots were excised on the same day by Dr. Humphry with antiseptic precautions, the incisions embracing some of the adjoining sound skin. The edges were brought together with needles. 12th—The edge of the incisions had united and the pins were removed. 14th—The lower place was a little inflamed. 17th—For the first time a gland was felt in the axilla. It was not painful on pressure. The antiseptic bandage had not yet been removed. 18th—When the wounds were dressed they appeared dry. The lower one was inflamed and indurated, and the places where the pins had been had sloughed. 20th—There was severe pain in the axilla. Two glands were enlarged and one was very painful when pressed. There was a feeling of tightness about the chest. 21st—Dr. Cory felt ill with a peculiar depression about the sides of the chest and between the shoulders. The axilla was very tender. Antiseptic dressing was left off. 22d—The induration of the lower wound was less, and axillary pain much less. Water dressing was applied. 23d—The upper wound was healing; the lower one was not now indurated. He felt ill. 24th—The wounds were doing well, but axillary pain was very severe. There was a tender spot in the middle of the sternum. 25th—He began to take 5 grains mercurial pill daily. 25th.—He sweated much during the night. 27th—He had rheumatic pains but slept better. The upper wound was healing rapidly; the lower one was stationary. 29th—Towards evening the throat felt very sore. 30th—The glands of the neck were painful, and movements of the head caused pain. 31st—He felt better. For the first time roseola was noticed on the forehead, temples, back of the neck and below the ears, also on the lower part of the abdomen. The eruption lasted four days. Dr. Cory now placed himself under antisymphilitic treatment. In their comments on the cases, the committee remarked that "it is conclusively proved by Dr. Cory's experiments that it is possible for syphilis to be communicated in vaccination from a vaccine vesicle on a syphilitic person, notwithstanding that the operation be performed with the utmost care to avoid the admixture of the blood." They also call attention to the fact that the infants from whom Dr. Cory took his lymph were, in

all cases but one, subjects in whom active symptoms of syphilis were unmistakably present, and therefore in such a condition as would certainly have precluded their use as vaccinifers by even an inconsiderate and reckless vaccinator.—*London Medical Record.*

EXAMINATION OF COMMERCIAL PEPSINS.

Mr. E. V. Zoeller, of Tarborough, read a paper on the above subject at the meeting of the *North Carolina Pharmaceutical Association*, in Charlotte, August 14th. He shows that of the samples of commercial pepsin one was totally inert, and many others very feeble. He does not publish the names of the makers to guide physicians in the selection of the particular brand to be relied upon, but enough is given to show how little medical men suspect the great frauds which may be practiced upon their patients. The diversity of the activity of pepsin, as shown by Mr. Zoeller, *varies from a sample one part of which could not digest a particle of albumen, to two other specimens of which 1 part dissolved 400 parts!* Three specimens digested from 10 to 15 parts of albumen; two between 50 and 60; one between 15 and 20; one between 2 and 4; one between 3 and 6; one between 100 and 125; one between 100 and 150; one in which 10 parts of pepsin failed to digest 5 of albumen; one in which 10 parts digested between 5 and 10 of albumen; one, 5 parts of pepsin failed to digest an equal weight of albumen. Moral: Apply the Pharmacopœia test from time to time to the pepsin you give your patients.

STEEL CHIP REMOVED FROM VITREOUS BY ELECTRO-MAGNET.—Mr. P. H. Mules, Manchester, England, Eye Infirmary, reports the successful removal of a piece of steel from the vitreous by means of a powerful magnet. Chloroform was administered and the sclera opened through the tendon of the inferior rectus. Through this opening an armature, or end of a powerful electro-magnet, was introduced, and on withdrawing it the missile was found attached. The patient recovered with unaffected vision.

OBITUARY.

SURGEON JOSEPH JANVIER WOODWARD, U. S. A.

BREVET LIEUTENANT-COLONEL JOSEPH JANVIER WOODWARD, Surgeon, U. S. Army, who died near Philadelphia, on Sunday, August 17, 1884, at 1 P. M., was born in Philadelphia, October 30, 1833, and at the time of his death was not quite fifty-one years of age. He was educated at the Central High School of that city, and, in 1850, received the degree of A. B. He devoted himself to the study of medicine, and graduated from the University of Pennsylvania in 1853. Two years later, in 1855, he received the degree of A. M. from the Central High School, acting as the valedictorian of his class. Immediately after his graduation, he entered energetically upon the practice of his profession in his native city, devoting a large portion of his time to that branch in which he afterwards achieved such a decided success—the microscopical investigation of pathological anatomy, and of kindred subjects. On May 17, 1858, he read before the Biological Department of the Academy of Natural Sciences, in Philadelphia, a paper “On the Minute Anatomy of Three Cases of Cysto-carcinoma,” which will be found on page 54 of *The American Journal of the Medical Sciences*, for July, 1858. Other papers, read before the same Society, followed rapidly : “Remarks on Anatomical Diagnosis of Cancer,” November 15, 1858 ; “On Suppuration in Cancerous Growths,” March 21, 1859 ; “On Errors in the Anatomical Diagnosis of Cancer,” December 4, 1859 ; and “On a Secondary Cancer of the Axilla,” January 16, 1860.

When the war broke out in 1861, he offered his services to his country, and entered the Army as Assistant Surgeon, U. S. A., on August 5, 1861. He was with the Second Artillery, in the Army of the Potomac, until May 19, 1862, when he was assigned to duty in the office of the Surgeon-General in Washington, where he located and organized several hospitals, and, for a brief period, was in charge of the Patent Office Hospital. Relieved from this duty, he was placed in charge of the Pension Division of the Surgeon General's Office and of the Medical Section of the Army Medical Museum, which had then been opened for the collection of specimens of morbid anatomy, surgical or medical. At the same time,

the task was assigned to him of collecting the material for the medical portion of the *Medical and Surgical History of the War*, while his colleague, Dr. Otis, had charge of the collection of material for the surgical history and the surgical branches of the Museum collection. Both these officers prepared reports on the material available, which were published as "Circular No. 6" of the Surgeon General's Office, on November 1, 1865. The second half of the circular, which was very favorably received by military surgeons, was prepared by Dr. Woodward. In the following year he made a report "On Epidemic Cholera in the Army of the United States during the Year 1866," which appeared as "Circular No. 5," Surgeon General's Office, on May 4, 1867, and which was followed in June, 1868, by "Circular No. 1:" "Report on Epidemic Cholera and Yellow Fever in the Army of the United States during the Year 1867."

In the meantime, the collection of the material for the *Medical History of the War* had progressed rapidly, and, on November 12, 1870, he issued his first volume of 726 pages, quarto, containing a series of statistical tables, presenting a summary view of the facts embodied in the monthly reports made to the Surgeon General with regard to the sickness of the Army, the deaths and the discharges on surgeon's certificate of disability.

After the close of the war, he had returned with increased fervor to his investigations in microscopy, and especially in photo-micrography, and the results of his experiments, which made him famous in Europe, as well as at home, were given in a series of publications, which followed each other in rapid succession:

"Report on the Magnesium and Electric Lights as applied to Photo-micrography." 6 pp., 4to., 11 photographs. Surgeon General's Office, 1870. "Report on the Oxycalcium Light as applied to Photo-micrography." 3 pp., 4to., 2 photographs. Surgeon General's Office, 1870. "Report on an Improved Method of Photographing Histological Preparations by Sunlight." 10 pp., 4to., 11 photographs. Surgeon General's Office, 1870. "Report on the Histology of Minute Bloodvessels." 8 pp., 4to., 11 photographs. Surgeon General's Office, 1871. "Report on the Minute Anatomy of Two Cases of Cancer." 10 pp., 4to., 2 photo-lithographs. Surgeon General's Office, 1872. "Memorandum on Pleurosigma Angulatum and Pleurosigma Formosum." 4 pp., 4to., 8 photographs. Surgeon Gene-

ral's Office, 1871. "Memorandum on *Surirella Gemma*." 1 p. 4to., 2 photographs. Surgeon General's Office, 1871. "Memorandum on the Test Podura." 3 pp., 4to., 5 photographs. Surgeon General's Office, 1871. "Memorandum on *Amphipleura Pellucida*." 1 p., 4to., 2 photographs. Surgeon General's Office, 1871. "Memorandum on the Nineteen-band Test-plate of Nobert." 4 pp., 4to., 9 photographs. Surgeon General's Office, 1872. "Four Letters to the Surgeon General, accompanying Photographs of the Mosquito, certain Parasites, the Proboscides of certain Flies, and Miscellaneous Photographs of Insects and Parts of Insects." 8 pp., 4to., 35 photographs. Surgeon General's Office, 1872. "Remarks on Photographic Micrometry in Trans. of the American Medical Association, 1876; Application of Photography to Micrometry, with Special Reference to the Micrometry of Blood in Criminal Cases." Ibid.

In 1876 he had charge of the representation of the Medical Department of the United States Army at the International Exhibition at Philadelphia, and the success of the medical exhibition was mainly due to his energy and activity. During the succeeding two years he devoted himself entirely to the preparation of the second medical volume, which appeared on March 25, 1879. The work treats on the "Alvine Fluxes," and will be a lasting testimony of the zeal and indomitable perseverance of the author. In careful and painstaking research of the literature of the subject, it surpasses all previous publications. The anxious pursuit of this work had gradually undermined his constitution, never very robust, and, in the summer of 1880, he went to Europe to regain his health. He returned in somewhat improved condition, but unfortunately was again prostrated by a fall from his horse in the spring of 1881, by which he fractured his leg. Barely recovered from this accident, he was called, in July, 1881, to the bedside of the lamented President Garfield. His quiet and patient services, frequently under a flood of abuse from professional, as well as non-professional journals, in this new field of action, are too recent to need to be recalled. We will only here state that he kept full notes of daily, even hourly observations of the patient's condition, which he intended to publish as a defence, if such were needed, at some future time. Sickness and death have despoiled him of this opportunity.

Time and space have allowed us to refer only to a few of the numerous publications of this indefatigable worker. A close

observer, tenacious in his convictions of what he conceived to be right, writing to the point without flourish or embellishment, fearless in the expression of his views, courting rather than avoiding criticism, he was ever ready to enter the lists in defence of his opinion.

Dr. Woodward's last editorial work was his obituary notice of his colleague, Otis, which appeared in the *American Journal of the Medical Sciences* July, 1881.

"For faithful and meritorious services during the War," Dr. Woodward received the brevet ranks of Captain, Major and Lieutenant Colonel, and on June 26, 1876, was promoted to the rank of Major and Surgeon. He became a member of the American Medical Association in 1865, and in 1881 was chosen its President, being the first medical officer from the Army to whom this honor was accorded. He was a member of the College of Physicians of Philadelphia, of the National Academy of Sciences, of the Philosophical Society of Washington, an honorary member of the Royal Microscopical Society and of the Quaker Club of London, of the Royal and Belgian Societies of Microscopy, and of many other societies in this country as well as in Europe.

His decease adds another name to the list of prominent men connected with the Surgeon General's Office, whom death has removed within the brief period of three and a half years. On February 23, 1881, occurred the death of G. A. Otis, the famous author of the history of the surgery of the war. Two years later, on April 5, 1883, Brigadier General J. K. Barnes, who had watched by the bedsides of two martyred Presidents, passed away, and, on October too, of the same year, Surgeon General C. H. Crane, at whose suggestion both Woodward and Otis had been selected as the compilers of the Medical and Surgical History, died after a brief illness.—*Philadelphia Medical News*.

NOTES.

IF WE are to take the cue from our literary contemporaries, we must believe that the doctor who undertakes novel-writing, as a diversion, is about as likely to succeed as the novel-writer who assumes the rôle of doctor; indeed, plainer things have been said by the literary reviewer; and still the art of fiction promises to be a fashionable field for some of our not fully occupied notables.

MR. CÆSAR HAWKINS, one of the oldest British surgeons of eminence, died recently, in London. He was one of the original members of the London Pathological Society in 1846. He was highly esteemed and venerated by his contemporaries, one of whom has honored him with the appellation—"the honored Father of English Surgery."

UNILATERAL CHROMIDROSIS.—Dr. J. C. White, of Boston, reported to the *Am. Dermat. Society* a case of unilateral sweating which stained the shirt bright yellow, in the person of a workman in a sugar-refinery. There was no excessive sweating of the side of the body yielding the yellow sweat. Analysis showed it to be of an oily character, readily extracted by ether, and yielding peculiar absorption bands when examined with the spectroscope. Its nature was not more definitely determined.

DR. CHARLES WALTER CHAMBERLAIN died in Hartford, Connecticut, August 21, 1884, aged forty years. Dr. Chamberlain was at the time of his death, and for years previous, the Secretary of the Connecticut Board of Health. His public services were chiefly in the department of State medicine. He was a most diligent student of hygienics, and a clear-headed executive officer of health. He served his native State with marked ability, making for himself a national reputation. He served continuously on important committees in the American Public Health Association, and was esteemed a prudent but ardent promoter of the causes which this great Society has espoused. Dr. Chamberlain was also a busy practitioner of medicine, and of late years had devoted special study to laryngology.

His loss will be a great one to the cause of Public Health.

Dr. E. M. Summerell, of Salisbury, has been chosen to fill the place of Assistant Physician at the Morganton Asylum. We commend the wisdom of the Board in their selection.

SUGAR OF LEAD SOLUTION A TEST FOR OLIVE OIL.—Cotton seed oil gives, when mixed with a solution of sugar of lead, a peculiar red color. Solution of subacetate of lead saponifies cold olive oil. If cotton seed oil be present, saponification will not take place, and there will be a red reaction.—S. S. BRADFORD, in *American Journal Pharmacy*, September.

PROF. BARTHOLOW says: "I am prepared, after additional experience, to repeat the affirmation that there is no agent comparable to chloral for Asiatic cholera. It is best to give coincidentally morphina and atropina. The Mississippi Valley is as much the habitat of cholera as the valley of the Ganges is, the conditions being the conditions being the same, and sporadic cases occurring every year." In the condition preceding the algid stage strychnine is efficacious. It is best administered as the sulphate, combined with sulphuric acid. Prof. Bartholow has had a large experience with cholera.—*College Record*.

THE FIRST PHARMACOPŒIA U. S.—Prof. Maisch gives us in the last *American Journal of Pharmacy* an account of the discovery of the first Pharmacopœia published in this country, bearing date 1778. The translation of the title page, from the original Latin, reads: "Repertory || of || Simple and Efficacious Prescriptions, || for the use of the || Military Hospital || Belonging to the Army || of the United States of America, || Adapted especially to our present state of need and poverty, which we owe to the ferocious cruelty of the enemy, and to a cruel war brought unexpectedly on our Fatherland. Wm. Brown, M.D., Author Second Edition. Philadelphia: From the office of Charles Cist, 1781."

The oldest Pharmacopœia up to this discovery was that of the Massachusetts Medical Society, in 1808, and New York Hospital, in 1816. The *Journal of Pharmacy* gives the complete reproduction of the little volume. There are few things of interest in the preparations, which number exactly 100, for internal and external use. Lint prepared by saturating it with "*Vitrioli Cerulei*," one drachm to one ounce of water, was one of the army surgical dressings of that pre-Listerian period.

The 21st October is Doctor's Day at the Exposition.

I TAKE SURGERY to be much more certain by reason that it sees and feels what it does, and so goes less upon conjecture ; whereas the physicians have no *speculum matricis*, by which to discover our brains, lungs and liver.—*Montaigne*.

REMOVAL OF A PIECE OF METAL FROM THE EYE BY A MAGNET.—Dr. J. J. Chisolm records the following in *Trans. Med. Ch. Faculty of Maryland* : “The very efficient instrument which I here exhibit is the invention of Dr. E. Gruening, of New York, for which he deserves much credit. It consists of a bunch of magnetic rods or cylinders, about four inches in length, with ends secured in iron caps, from one of which is attached a conical tapering needle made of malleable iron. This combination of magnets forms a powerful battery, capable of drawing to its needle-point a piece of iron of considerable size and weighing several grains. Such fragments of iron as are likely to be lost within the eye-ball will move toward the magnet if brought within an area of one fourth of an inch, and when drawn to the needle will hold to it with considerable firmness. It was with this needle that I recently extracted from the vitreous chamber through a corneal wound the piece of iron here exhibited, weighing four grains. It had perforated cornea, iris and lens, lacerating so many vessels in its passage as to fill the anterior chamber with blood, which completely concealed its presence. The result of the removal of the foreign body is the saving of a good-looking eye and protecting the patient against the compulsory enucleation of the injured organ. The following is the report of the case :

“J. S., aged 24, a mechanic, boiler-maker, came to me for treatment on the 19th of March, 1884. Pursuing his occupation, riveting boiler-plates, he was chipping off the edges of a plate, when he was struck in the right eye with a piece of metal, flying before the powerful stroke of his hammer. He was momentarily stunned by the blow, but soon recovered himself, when he found that he had lost sight in the injured eye. The superintendent of the works had him put on the street-cars, and within two hours from the time of the accident he was under my inspection. The anterior chamber was full of clotted blood, and only perception of light remained. There was a small wound in the lower part of the cornea. This was all the injury that I could find. Upon inquiry of him how the accident happened, he

assured me that the piece of iron which struck him must have been of considerable size—too large to have entered the eye-ball. The presence of the wound in the cornea he attributed to a sharp point on the broken metallic piece. He felt no special pain in the eye beyond a general stiffness of the lids and fullness of the eye-ball. A small wound in the eye-brow was sufficient to explain these lid symptoms. With no reason why I should not accept his belief that the extravasated blood within the anterior chamber was the immediate result of the blow, with concussion of the ciliary bodies and vascular iris, a condition which I had often before seen fill the anterior chamber with blood, I yielded to a strong desire to probe the corneal wound with a smooth blunt magnetic needle which happened to be lying in its case on my examining table. I knew that its careful introduction through the cornea could do no harm, as I did not propose going deep enough to injure the lens. The magnetic point had not entered the blood clot in the anterior chamber $\frac{1}{8}$ of an inch before I felt the slight jar caused by some metallic fragment jumping toward the magnet. I drew out the needle. It resisted at the corneal wound and needed some little force to get it away from the eye-ball. I knew immediately by this manipulation that a piece of metal was in the eye and that a magnet, by its powerful attractive force, had dislodged it from its primary position and had brought it the corneal wound. The reintroduction of the point of the needle renewed the clicking sound and feeling. When withdrawn it came away again free. On a third introduction and withdrawal, the piece of iron, which seemed this time to have been attracted by its extreme end and in the axis of its longest diameter, followed the needle as if it were a continuation of its point. As it was drawn out of the wound it surprised me much both by its size and length. As you see it here, it is a stout, flat scale $\frac{1}{2}$ inch long by $\frac{1}{8}$ of an inch wide, a parallelogram in shape, with one end a little narrower than the other. It was fortunately the narrowest end which finally caught hold of the needle-point and followed it through the corneal wound. Cold water dressings and the installation of a strong solution of atropia was the treatment adopted. In three days the blood had been absorbed and the interior of the eye could be explored. The pupillary edge of the iris had been cut, and the lens transfixated by the piece of iron in its passage, causing a traumatic cataract with largely ruptured capsule, and leaving a ragged pupil, which, however, had dilated under the influence of atropia. At the end of two weeks the

eye gave so little trouble that the patient ceased his visits, considering himself well enough to resume his work."

COMBINED VERSION IN PLACENTA PRÆVIA.—C. Behm has used combined version in forty cases of placenta prævia, without a single death. This must be regarded as an extraordinarily good result for a condition which ordinarily gives a mortality of forty per cent. Hofmeier has already obtained similar results in the treatment of placenta prævia.

The operation is performed as follows: When dangerous hæmorrhage comes on the vagina should be tamponed until the cervix is closed. This being done, and the woman anæsthetized, the whole hand is introduced into the vagina, and two fingers into the cervix. If the membranes present, the operator endeavors to rupture them with the finger, then draws the presenting part (unless it be the buttocks) to one side, at the same time making pressure from without so as to carry the buttocks down, until he can grasp a foot. This is drawn through the cervix, so that the breech acts as a tampon on the lower segment of the uterus, and the placenta is pressed against the sides of the uterus. In central implantation of the placenta, the finger should be pushed through the centre. After this version the operator waits for the spontaneous expulsion of the child, or at least complete spontaneous dilatation of the cervix, in order to complete delivery. The duration of labor after version is between one-half an hour and eleven hours, the average being one or two hours. The mortality for the children by this procedure is very great, but the chances for the mother are better. The mortality for the children is, however, no greater than by the old operation. The causes of the great mortality of the mother under the use of the continuous tamponade is the infection through the blood and other matters adhering to the tampon.—*Boston Medical and Surgical Journal*.

BOOKS AND PAMPHLETS RECEIVED.

Visions of Fancy. Baskett. A poetical work. St. Louis, Mo. Commercial Printing Company. 1884.

The Treatment of Diabetes Mellitus. By Austin Flint, jr., M.D. Reprint from *Journal American Medical Association*. Pp. 35.

Quiz Compend—A Compend of Organic Chemistry. By Henry Leffmann, M.D., D.D.S. Philadelphia: P. Blakiston, Son & Co. Price \$1.00.

Osteotomy and Osteoclasia for Deformities of the Lower Extremities. By Charles T. Poore, M.D. New York: D. Appleton & Co. 1884. 187 pp. 8vo., cloth.

Eleventh Annual Report of the Secretary of the State Board of Health of the State of Michigan for the fiscal year ending September 30, 1883. Lansing: W. S. George & Co., State Printer.

Handbook of the Diagnosis and Treatment of Skin Diseases. By Arthur VanHarbingen, M.D. With two colored plates. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut St. 1884. Small 8vo. Pp. 282.

A Text-Book of the Practical Medicine Designed for the use of Students and Practitioners of Medicine. By Alfred Loomis, M.D., LL.D. With 211 Illustrations. New York: Wm. Wood & Co. 1884.

A Manual of Diseases of the Throat and Nose, Including the Pharynx; Larynx, Trachea, Esophagus, Nose and Naso-Pharynx. By Morell Mackenzie, M.D. London. Vol. II. Wm. Wood & Co. New York. 1884.

Practical Manual of Diseases of Women and Uterine Therapeutics. For Students and Practitioners. By H. McNaughton Jones, M.D., M.C.H., F.R.S.C.I. & E. New York: D. Appleton & Co. 1884. Small 8vo. Pp. 410. Price \$2.00.

A Text-Book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler, Prof. Pathological University of Zübingen. Translated and Edited for English Students by Donald MacAlister, M.A., M.B., Part II. Special Pathology. New York: Wm. Wood & Co. 1884. 8vo., cloth. Pp. 365.

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ORIGINAL COMMUNICATIONS.

ON EPILEPSY.

A Clinical Lecture by Prof. GERMAIN SEÉ, Physician to the Hotel Dieu, Member of the Faculty of Medicine, etc., Paris.

A few years ago epilepsy was regarded as incurable. It has been considered from remote antiquity as a sacred disease (*morbus sacer*). The Romans called it "*morbus comitialis*," as it was customary on the occurrence of an epileptic fit to interrupt the *comitia*, or public assembly—it was a disease which claimed to be respected—it did not belong to the domain of medicine.

The discovery of the treatment of epilepsy by bromide of potassium marked a new era in the history of this disease, so humiliating heretofore to the patient, the family and the physician; and now epilepsy enters into the rank of curable affections, or if not curable, it can be divested of half its terrors by means of this incomparable medicament.

In 1853 an English physician, Charles Locock, made his first researches relative to the action of bromide, and later completely

revolutionized the treatment of epilepsy. Locock, however, saw but one side of the question; inferring the utility of the remedy in general, he put forth the singular assertion that bromide of potassium has its maximum of power in women—that is to say in epilepsy, dependent on menstruation or on the genital functions. This is a two-fold error, for epilepsy has but ill-defined relations with the menstrual functions, and on the other hand, while acting on the sexual organs to calm erethism, it possesses properties much more general. Therefore the doctrine of Locock was vehemently combated by Radcliffe, McDowell and Wilkes, who showed that the action of bromide is not less conspicuous in adult men and in children than in females; and Brown Séquard, in demonstrating experimentally the action of this medicine on the vascular system, clearly established its far-reaching applications.

With these facts in mind, I began, in 1858, experiments which I have not ceased to carry out; during these twenty-six years I have treated 150 patients, 90 of whom have been observed for a long series of years; this is an indispensable condition for judging as to the utility of a course of treatment, since epilepsy often presents, after a prolonged calm, marked exacerbations which were quite unforeseen. The cases which I have tabulated present interest with respect to duration and number, and still more as being typical cases of the disease, all being uncomplicated with grave lesions of the encephalon, such as one observes in hospitals for the incurable or for lunatics, where the bromide fails completely, though generally successful in civil practice.

PATHOGENISTIC DEFINITION OF TRUE EPILEPSY.

In true epilepsy these four conditions must be fulfilled: (1) the disease must be chronic; (2) it must be primordial, that is to say independent of all organic lesion, traumatic or toxic; (3) it must be characterized by convulsive paroxysms or by psycho-motor troubles, all of which imply a temporary loss of consciousness; (4) it must have a pathogenetic relation either with permanent exaggeration of the reflex functions of the medulla oblongata and of its vaso-motor centre, or with the excitability of the cortical substance of the cerebrum.

(1) It is a chronic disease; it is consequently distinguished from

the convulsive, transitory seizures which present themselves under the influence of uræmia in general, particularly of the uræmic eclampsia of puerperal women ; it must equally be kept distinct from the infantile convulsions which are so often due to cerebral anæmia, and constitute no less often the remote prelude to the epilepsy of after life.

(2) Epilepsy, besides being chronic, is primordial ; you cannot, without risk of confusion, designate as epilepsy convulsive accidents, having for their point of departure some sort of reflex action. When an infant is taken with convulsions in consequence of indigestion, teething, the presence of worms in the intestines, you would not say that the child has epilepsy, when it has an affection which a simple purgative or vermifuge may cure.

The reflex convulsions having origin in some painful irritation, as, for example, neuralgia, wounds, foreign bodies, cicatrices which compress a peripheral nerve have also no right to be classed under the head of epilepsy ; in removing the cause, that is to say, the cicatrix or the foreign body, you are sure to cure the convulsions, which have only a general resemblance to epilepsy. Epilepsy implies permanence of the disease, repetition of the seizures without the possibility of arriving at the cause of the attacks, and suppressing them, as in the case of convulsions of reflex order.

When, by his numerous experiments, Brown Séquard produced artificial epilepsy in exciting or in sectioning peripheral nerves or the spinal cord, he created, so to speak, a new excitability, excessive in kind, in the encephalon ; this is the condition "*sine qua non*" of true epilepsy ; this property, when acquired or inherited from successive generations, may be brought into activity by the least disturbing cause, the simple irritation of certain territories of the skin, of certain cutaneous regions which Brown Séquard called epileptogenous zones ; all this is as remarkable as it is true ; but this epilepsy, by hyper-excitability of the central nervous system, has nothing in common with the transient reflex convulsions which cease with the causes which gave rise to them, and do not leave behind them permanent excitability of the nervous centres.

(3) After having established the fact of chronicity and of primordality, we have to establish the absolute independence of epilepsy of every organic lesion of the nervous centres, whether from traumatism or from toxic agents.

That is not epilepsy—the epileptoid paroxysm, which marks the commencement of diffuse periencephalists, otherwise called general paralysis of the insane. You would not consider as epileptic the patient who is affected with a syphilitic tumor of the brain of the nature of a gummra or exostosis, attended with occasional convulsions.

If the commencement of cerebral syphilis may manifest itself by a paroxysm of general convulsions, you may shortly see evidence of a paralyzing lesion located in a motor lobule of the encephalon, on the facial nerve, the third nerve, etc., and henceforth there is no long room for doubt.

The nature of the tumor is a matter of but little consequence; if, instead of a syphiloma, you have to do with a hydatid cyst, a cancer or sarcoma of the encephalon, gliomatous or tuberculous growths of the large or small brain, the result is the same; convulsions at first, then limited paralyses, depending on the part of the nervous system affected.

It will never come into the thought of the clinician to confound these lesions with epilepsy and to treat them by the ordinary remedies for the disease; the same remark applies to traumatic lesions of the encephalon, and especially to the bones of the cranium.

For a long time it was the custom to trepan the cranium of epileptic patients, to free the brain, then the operation was performed in order to extract foreign bodies, such as depressed fragments of bone; and to-day, since the discovery of the motor centres, the operation may often be performed with greater precision than formerly; the seat of the fracture of the internal table being determined according to the principles of cerebral localization laid down by Ferrier and others.

Gosselin has reported interesting facts of this kind, where the cure of convulsions has followed the ingenious applications of surgery to the cranial region. It must be admitted, however, that these are rather cases of epileptiform convulsions, or of partial epilepsies localized in a limited part of the muscular system (those epilepsies which, under the name of cortical epilepsies, merit a special description and study) than true epilepsy.

It is to this order of epilepsies that we must refer those traumatic epilepsies artificially obtained by Westphal, by lesions of the cranial vault in guinea-pigs. This experimenter has thus produced a

formidable artificial hyper-excitability of the cerebro-medullary centres.

To show the complete independence of epilepsy of every kind of lesion, I ought to mention also saturnine encephalopathy, ordinarily fatal and improperly described under the name of saturnine epilepsy; alcoholism of convulsive form; nor should absinth-epilepsy be omitted, a disease which has been experimentally produced in animals by Magnan.

PATHOLOGICAL RELATIONS WITH THE REFLEX FUNCTIONS.

We have spoken of epilepsy as a chronic disease and as a primitive disease; it is not difficult to prove that its chronicity depends upon a hyper-excitability inherited or acquired, but always permanent, of the reflex function of the spinal cord.

This excitability is principally manifested on the part of the medulla-oblongata, but the spinal cord and the pores probably also participate, all being centres of reflex action. It is in the bulb that the principal vaso-motor centre is situated; the greater part of nerves controlling the blood-vessels come from this source; vaso-constrictors and vaso-dilators, all emerge from the bulb and are distributed to the vessels of the base of the brain and of the face, which are precisely the most contractile of all the arteries, as is determined by the researches of Robin and his pupil Gimbert; perturbations of these nerves cause now cerebral anæmia, now vascular dilatation—that is to say, hyperæmia.

Hence one of the principal characteristics of the disease, the persistent hyper-excitability, affects the principal centre of excitation and the principal vascular centre, which are constantly under the liability of an exasperation of their reflex properties, and ready to engender convulsive or virtiginous attacks; on adding to the bulb the cerebral cortex and its excitability, we shall have the key to all the phenomena so complex and so varied in form which constitute epilepsy.

You now understand how those nervous diseases which exalt the reflex functions only in a temporary manner, such as tetanus-eclampsia, differ totally from epilepsy, despite the production of general convulsions. Hysteria, which resembles it more by its persistent hyper-excitability, does not ordinarily produce convulsions

of the same type and almost reverses the loss of consciousness which characterizes epilepsy.

One word concerning epilepsy from malformation of the bones, described by Lasèque; such malformations, arrests of the development of the encephalon (hydro-cephalus, micro-cephalus, cerebral-atrophy) often manifest themselves during life by lack of intelligence and epileptic convulsions; these epileptic patients have also deformity of the bones of the face, or exostoses (cranial or facial asymmetry, etc.)

To this category of epileptics, the cure of whom is impossible, I will add a kind of epilepsy less grave, which has its root in an organic disease of childhood. When, in the case of an epileptic, adolescent or adult, you make inquiries concerning his antecedents, you ascertain that the patient was subject to convulsions during the first three or four years of his life, and then that he obtained exemption from them for ten or fifteen years. What was the character of the first convulsions? were they simple functional troubles, indicating a hyper-excitability of the medulla-oblongata? Was this the inception of the epilepsy?

It is not always easy to answer these questions. What is, however, true is, that a great many epileptics have had convulsions in their infancy, of greater or less frequency and duration, showing a real predisposition to such reflex troubles. It can, however, hardly be said as a general rule that children who have fits in their infancy become epileptics as they grow up. I have in mind two young persons, one aged 22, the other about 24, who, at the age of two to six years, were a prey to grave attacks of convulsions; they got well—the one with permanent contracture of the neck and intellectual enfeeblement, the other with oddities of character and a violent temper.

To sum up—of these two great groups of epilepsy, the first, or simple epilepsy, is the most common; out of 150 cases of epilepsy, I have noted 140 which were true epileptics, the 10 others had marks of bony lesions or were victims of arrest of development, and all were affected with a certain degree of idiocy.

CLINICAL CHARACTERISTICS AND FORMS OF EPILEPSY.

Epilepsy presents itself under three principal forms:

1. Convulsive fits, or the grand mal.

2. Vertiginous epilepsy, the petit-mal.

3. The Psychical forms of epilepsy.

All these manifestations of epilepsy may be variously combined : Epilepsy major, or the grand mal, may exist alone or in combination with the petit-mal, which manifests itself in the interval of the convulsive crises. I have seen the latter continue for years as the sole manifestation, and resist all treatment. Epileptic delirium, which is often mistaken for a paroxysm of ordinary mania, sometimes presents itself in the interval of the great crises.

In five under the name of aura, have been described divers perturbations of the sensibility of movement or of vaso-motor innervation, which precede the major attacks under the title of prodromes, more or less constant, more or less near each other.

THE CONVULSIVE ATTACKS.

This comprises a tetanic phase and a clonic convulsive phase. The first is marked all at once by a transient palor of the countenance ; this palor, which results from contraction of the blood-vessels of the face, consecutive to excitation of the vaso-constrictor nerves, is soon followed by relaxation of the blood-vessels and afflux of blood to the face, which now becomes red.

At the same time the patient utters a piercing cry, unlike everything else, or a heavy groan, which appears to be due to tonic convulsion of the muscles of the larynx, under the influence of irritation of the spinal accessory nerves, which have their principal seat in the bulb. Whether there is the initial cry or not, the fit commences in reality by a sudden and complete fall to the ground, with instantaneous loss of consciousness, sensibility and movement. We shall see how to explain this loss of intelligence and of the sensory-motor faculties.

Immediately after the fall there are manifested tonic convulsions of the four limbs by the excitation of the spinal cord, and of the face by the excitation of the facial nerve ; the hypoglossal nerves are invaded in their turn, the tongue and speech are then profoundly troubled ; the motor branch of the tri-facial is affected, the lower jaw is in a state of trismus, and the tongue is bitten ; the pupil contracts under excitation of the scilio-spinal centre ; then the respiratory nerves undergo violent excitation, hence results tetanic con-

traction of the respiratory muscles ; the thorax is fixed, and then asphyxia commences—the second phase makes its appearance.

By the asphyxia the countenance becomes purplish ; the convulsions take on a general clonic character ; complete, absolute sopor is declared, with relaxation of the sphincters and voiding of urine and fecal matters, then placidity of the limbs, dilatation of the pupils, slow stertorous respiration from paralysis of the vagi. The scene lasts from several minutes to an hour or two, then the patient returns to consciousness. When these paroxysms come very near together, one fit succeeding another, they are called *sub-intrant* (*état de mal*).

RUDIMENTARY EPILEPSY OR PETIT-MAL.

The form of epilepsy the most dangerous, the most frequent, the most difficult to recognize, is that rudimentary form called epileptic vertigo or petit-mal. In the child it is often mistaken for fainting ; in the young girl for a neurasthenic eruption ; in the adult for an attack of anæmic vertigo, if the individual is pale ; for cerebral congestion, if he is plethoric. What characterizes the vertigo is the sudden but complete disappearance of the intellectual faculties ; sometimes it is a sort of distraction, a failure of attention, with muscular relaxation of the bladder ; if the patient is speaking he stops in the midst of his sentence till the fit passes off, then he resumes his thought and his sentence ; at other times he utters a jargon of words, knowing nothing of what he is about. If he is standing up, he staggers as if about to fall, stops all work in which he was engaged, drops everything that his hands may happen to hold, and his countenance turns pale and red alternately. So, then, the characteristic is transient—failure of the intelligence and loss of consciousness, of which the motor troubles are but the consequence and expression.

These “absenses” may constitute the whole disease: this was the case with a young English girl whom I had under my care for three years ; she had been treated for chlorosis with iron, and for neuropathy by hydrothropy, which provoked as many as forty petit-mal attacks per day. These paroxysms yield with difficulty to the bromides, but they do not lead to idiocy, as some pretend.

Another rudimentary form, and which often alternates with ver-

tiginous epilepsy, is that of *auto-motor petit-mal*, which manifests itself by movements of the head or trunk, by stiffness of the neck, torsion of the mouth, winking of the eyes, rigidity of the trunk, or a sort of unilateral reptation or rotation of the body.

PSYCHICAL EPILEPSY.

Besides the rudimentary forms and the graver attacks, I must mention those paroxysms of delirium and of mania, those aberrations of the mind, hallucinations with tendency to homicide or suicide, which manifest themselves between the attacks, and often occasion the most serious mistakes. I have often seen psychical epileptics treated for insanity and cured by bromide. Legrand du Saule has made a careful study of these disastrous errors ; bromide of potassium constitutes in these cases a marvelous means of treatment ; its use is promptly followed by the cure of these false insanities.

AURAS.

All the forms of epilepsy may be preceded by diverse sensations of formication, or of pain, or of *souffles* taking their departure from the chest, the abdomen, and especially from the fingers. It is these auras, these *souffles*, which are sometimes arrested by ligatures.

Troubles of the sight and hearing have also been noted. The same word (aura) has been applied to certain cramps and oscillatory movements which propagate themselves from the hand to the arm, then to the head, which turns to the same side by reason of contraction of the sterno-mastoid and trapezius, corresponding to the arm affected ; these are the motor-auras, whose march towards the head or trunk may sometimes be stopped by strongly flexing the affected member. Vaso-motor troubles, flushes, abnormal heats, as precursors of an epileptic fit, have also been noted. All these phenomena constitute rather scientific curiosities than important realities.

REMOVAL OF THE PLACENTA AFTER ABORTION—A PLACENTAL SCOOP.

By W. T. CHEATHAM, M.D., of Henderson, N. C.

The first question to be considered when called to a case of threatened abortion is, can the abortion be prevented? The answer to this question usually depends on the dilatation of the os and the amount of hemorrhage. If the hemorrhage has been active, and the amount of blood lost considerable, the possibility is that the utero-placental connections are so separated that abortion must ensue. Should a vaginal examination show the os to be well dilated, and the membranes bulging, matters have gone so far that we cannot reasonably hope to prevent expulsion of the uterine contents; however, more frequently on our arrival at the bedside, we find that the ovum has been expelled and the secundines retained. The os being sufficiently dilated to admit the passage of the embryo, it is safe to conclude that it will admit the entrance of the finger, and is in a condition to admit of manual or instrumental interference. It is admitted by all authors who have written on this subject that when the ovum is expelled and the placenta remains behind, we may expect the danger from hemorrhage to continue until the placenta and membranes are expelled. Under these circumstances, and leaving out of consideration the danger of septicæmia resulting from a retained decomposing placental mass, it is incumbent, as a means of safety to the patient, that we empty the uterus of its contents as speedily as possible, and avoid the immediate danger from hemorrhage. I shall not enter into a detailed discussion of the treatment recommended in the text-books, and usually practiced for the immediate removal of the uterine contents when abortion cannot be prevented. We are told to employ the fingers as a means of extraction, to place one hand above the pubis, press the uterus down and make steady the fundus uteri, while with the other we pass the finger into the uterine cavity (one or more, as most convenient) and scrape out the offending mass, thus terminating the danger. In patients with thin, pliant abdominal walls, we will most likely succeed in the removal of the secundines by this method, but this finger-delivery not unfrequently is exceedingly difficult of

accomplishment. Who has not met with cases that the examining "finger can but just touch the more or less detached placenta through the internal os, beyond which point was reached with difficulty," the finger being too short to reach the fundus uteri and scrape off the adherent placenta; also in a sensitive, unmanageable patient, with fat and thick abdominal walls, and the uterine cavity too narrow to permit the flexion of the fingers after they have been forced through the cervix, we will be thwarted in our efforts, and must of necessity look to other and more efficient means to accomplish the desired end. When the placenta and membranes cannot be removed with the fingers, various instruments have been devised for seizing them and bringing them out. Hodges' modification of the bullet forceps is a failure, for the reason that you cannot maintain your hold on the placental mass after you have seized it with the instrument. The same objection does not obtain as to Dewees' hook, but this is a sharp instrument, and incalculable damage may be inflicted when not used with skill and caution.

The Duck-bill, Mundé's, Loomis' and other placental forceps of like character, are good and safe instruments, but are not easy of application, it being necessary in many cases to use the speculum in order to apply them intelligently. Every practitioner of experience has felt the necessity for an instrument that would obviate the delay incident to the introduction of the speculum, besides the surroundings and condition of the patient would in many instances make it deficient and hazardous to carry out this plan of treatment.

In the February (1883) number of the *American Journal of Obstetrics*, Dr. Mundé, its editor, has published a description of a placental curett:

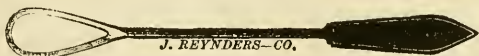
"This instrument is merely an enlarged Thomas' copper-wire curette." Dr. Mundé says: "The method of using this instrument is the following: 'The patient (anæsthetized or not) is laid cross-wise on the bed, with her hips as near as possible to the edge, and her thighs are separated by assistance if necessary. The physician then, having first ascertained as nearly as possible the site of the retained placenta, introduces the index-finger and on it the large curette (the instruments all being placed in carbolyzed water) into the uterus, and while the left hand steadies the fundus uteri through the abdominal wall, the right gently guides the curette in its prying and scraping action on the placenta. A repeated introduction of

the instrument is often necessary before piece after piece of the secundines is detached, and the placental forceps are occasionally needed, either to grasp and withdraw already detached masses of secundines, or to nip off small nodules of still adherent placenta."

Dr. Mundé, recognizing the necessity of immediate delivery of the uterine contents, when abortion cannot be prevented, and the means heretofore employed to extract the placenta after abortion as unsatisfactory, devised the curette as described, which is a most excellent and practical instrument.

Having myself for several years been convinced of the unsatisfactory teachings on this subject, and the practice usually followed to be too compromising, in February, 1880, I devised and had made an instrument (by John Reynders & Co.) which has proved satisfactory in my hands, having used it with uniform success, not failing to turn out the uterine contents with ease, safety and expedition.

It consists of a handle, stem and fenestrated scoop-shaped end, for extracting the uterine contents; its edges are smooth and oval,



preventing the possibility of danger by cutting. The whole instrument is nine and a half inches long, delicately constructed, yet sufficiently strong. When it is apparent that abortion cannot be prevented, the hemorrhage severe and the os sufficiently dilated to admit the index-finger, the placental scoop can be introduced with ease, and the uterine contents quickly turned out, putting the patient beyond danger from hemorrhage and septic difficulties likely to supervene when we have a retained and decomposing mass of secundines. In order to use the scoop intelligently and successfully, the patient should be placed upon her back, with her extremities drawn up and supported by an assistant, or, if preferred, put upon her side, with her hips brought close to the edge of the bed, the extremities flexed and held apart by assistants. With the index-finger in the os as a guide, the scoop should be introduced, with its convexity pointing to the posterior intra-uterine surface and passed well up to the fundus uteri, with the left hand above the pubis to steady the uterus, the instrument with the other should be made to

sweep the uterine cavity, making its entire circuit two or three times, the edge of the instrument impinging the uterine parietes, breaking asunder all placental connections, and then withdrawn, with its scooped surface presenting posteriorly, the point of the instrument pressing the uterine surface, bringing with it the product. Occasionally, after having detached the placental mass, on the withdrawal of the instrument, it will be left loose in the os, nothing remaining but to take it away with the fingers, or, if necessary, introduce the scoop again and fish it out. It is my only purpose in writing this article to place the placental scoop before the profession, that its utility may be fully tested. I have not, therefore, entered fully into the discussion of the subject of the immediate removal of the placenta after abortion, but will refer those who desire information on this subject to the full, free and exhaustive discussion of this interesting and important matter, by Drs. Alway and Mundé, in the February number of the *American Journal of Obstetrics*.

Those desirous of procuring a placental scoop can do so by applying to John Reynders & Co., 303 Fourth Avenue, New York.

OTITIS MEDIA FOLLOWING MEASLES.

By W. B. PRITCHARD, M.D., Wilmington, N. C.

In April last I was called to see ———, a boy æt. nine years, whom I found suffering considerably, the pain being confined to the right ear. I had attended him during the ten days previous through an attack of measles, in which there had been, in its incipency, considerable febrile excitement, his temperature on one occasion reaching as high as 104°. I succeeded, however, in reducing his temperature and in keeping it within reasonable limits by the administration of quinine and aconite, given separately, the latter in combination with opium (deod. tr.) in small doses, and the case progressed favorably to convalescence without any apparent untoward symptoms. Supposing the patient to be in no further need of any attendance, I left the case,

with instructions, however, that the child should be carefully protected from exposure for a few days. Three days afterwards I was called in, as above stated, to treat a case of "earache."

The earache had commenced in a slight uneasiness the day before, and the child, I was told, had been unable to sleep at all during the night just passed. There was little or no fever, but the boy complained that the pain was quite severe. There was some deafness in the ear affected, but no discharge. On examination no changes in the pharyngeal mucous membrane were apparent except, perhaps, a slight hyperæmia near the orifice of the eustachian tube leading to the ear affected. I next directed by attention to the ear itself, and on examination I found the external meatus somewhat congested near the membrane, though I had no difficulty in adjusting the aural speculum. The drum membrane, as well as could be made out with the means of examination at my disposal, appeared in an hyperæmic condition and bulging considerably, indicating an accumulation of pus behind it. I determined not to wait for spontaneous perforation, but to puncture the membrane and bring about an evacuation of pus at once, both on account of the pain which the child suffered and from a fear that the possible thickening in the membrane from previous inflammations would interfere with spontaneous evacuation of the pus externally. (The mother had told me that four years ago the child had thrust into its ear a hair-pin, giving rise to inflammatory symptoms, which had persisted for sometime, but which had eventually disappeared entirely, the discharge and the temporary deafness resulting from the receipt of the injury having ceased to exist in less than a month after the injury.) I had no instrument at hand sufficiently delicate in structure for the purpose, but having decided not to wait, I carefully washed out the canal with comfortably warm water (using an ordinary small syringe), and then introduced the speculum, and with the assistance of the refracted light from a head-mirror, I perforated the membrane in the left lower quadrant (the most bulging point) with the *needle of an hypodermic syringe*. "Horrible surgery!" you will say, and I grant you a basis of truth for the charge in that my method of procedure was horribly unprofessional, considered from the standpoint of modern surgery. The method, however, though primitive in the extreme, was successful. There was an immediate discharge of pus from the very slight opening made, which I allowed to continue for some little time, after which I carefully cleansed the external canal with some carbolyzed absorbent cotton.

The after treatment consisted in the application, twice a day for four days, of a powder compounded of equal parts of borax and iodoform, blown lightly in the ear through an ordinary quill, the canal first, before each dressing, being carefully washed out with moderately warm water, slightly carbolized. The discharge persisted for three days, slowly and in small quantities, at the end of which time it had either ceased entirely or was so slight as to be imperceptible. The patient suffered no pain after the perforation of the membrane, and the recovery, I have every reason to believe, is complete. Deafness has entirely disappeared, and the patient is not now conscious (unless his attention is called to the fact by another) that he has an ear.

My object in making public the history of this case is two-fold: I wish first, to call attention to the fact illustrated in this instance and established from "time immemorial," that the sites of former inflammatory affections show a strong tendency to become again similarly affected under the stimulus of causative agencies predisposing to a renewal of inflammatory trouble. The practical benefit to be derived from attention to this point is obvious: Practitioners will be enabled thereby to anticipate certain inflammatory troubles in the eye, ear and throat following measles, scarlet fever, etc., in cases in which there is a history of former trouble in these localities. The second object I have in view is to add a moiety to the rapidly increasing reputation of iodoform as a curative agent in suppuration affections. I believe its use to have been of very great benefit in the case here given, both through its direct curative powers and as a local anæsthetic. The therapeutic indications for the use of iodoform are restricted, in the minds of only too many, solely to syphilitic affections. With the laity this is its sole province. The sooner the mistake is corrected the better for suffering humanity.

NOTE.—I am indebted to Dr. Peckham, of the Marine Hospital, Wilmington, North Carolina, for a suggestion as to the advisability of using iodoform in sores somewhat analagous to the one herein described.

SELECTED PAPERS.

AN ADDRESS ON ABDOMINAL SURGERY.

[Delivered August 25, 1884, before the Canadian Medical Association at its Annual Meeting in Montreal, by Lawson Tait, F.R.C.S., Surgeon to the Birmingham and Midland Hospital for Women, Birmingham, England.]

MR. PRESIDENT AND GENTLEMEN :—Every gardener knows that a plant long grown on the same soil rises or sinks, or somehow or other gets to a level from which it varies not so long as its conditions remain the same ; and he knows as well that if he takes that plant to a new soil which suits it, if he grows it under new conditions, its growth and change and development are practically endless. What we know of plants is, within limits, true of humanity, and if we require proof and illustration of this, where need we go but to this endless continent of yours ?

I am not at present concerned with natural boundaries created by languages which come from Sweden and Poland, Denmark and Scotland, Russia and Ireland, which temporarily limit intercourse between different people who perhaps settled here. Still less do I trouble about a line on the map which marks a practical republic on the south from a splendid democracy on the north. I have only to do with the great fact in human history—I think the greatest fact—that from out of the troubles and distresses of our eastern countries, or out of the countries oppressed by over-population, and still more by the effete policies of governments of past centuries, dislocated into modern life, from these there has come a great country and a great people, whose growth, change and development promise to be practically endless.

Of my own country and of my own people you will not expect me, you would not wish me, to say anything disparaging. We are an old and respectable race, and by virtue of your descent you share that age, and you have brought over with you a full share of the respectability. But in transit you have lost that questionable virtue of extreme conservatism which we retain in every conceivable phase

of life. We used to have mail-coaches protected against robbers by armed men, properly called guards, and we continue to call our railway servants guards, without the slightest reason save that they seem to be in some fashion successors to the blunderbuss bearers of the eighteenth century. On the other hand, you very properly name the same officials conductors. We still build our railway carriages in compartments fitted to hold six people—confined boxes that are stuffy, inconvenient, wasteful of room and dangerous—and we do this only because one hundred years ago we built our stage coaches on this pattern. Fifty years ago we thought, and we continue to think, that by sticking three of these old coaches end to end we must of necessity construct the best kind of vehicle for railway traveling. Untrammelled by tradition you have contrived to build carriages far more convenient and suitable in every way. You have even sent them over to England for our use some ten years ago, but they had actually to be removed from some of our railways because the public would not use them.

I might gather further illustrations of that intensely conservative spirit which governs everything English. I might wander into the lines of religion and politics and hundreds of other sources, but I prefer to take one of which I can speak at length and in detail; one upon which I believe, if I read aright the compliment you pay me by asking me to appear here before you, I can speak with some authority.

In my early days the medical education of a British youth was not considered complete unless he made a tour of the schools of France and Germany, and, like others, I felt of myself as was said of Proteus:

“’Twould be a great impeachment to his age
In having known no travel in his youth.”

But I wish now that the time and money therein spent had been directed to the western instead of to the eastern continent, and I now venture to predict that ere long it will be to the medical schools of America, rather than to those of Europe, that our students will travel, as did the apprentices of old, before they settled down to the serious exercise of their craft.

For many years past I have been visited by numbers of my professional brethren from this side of the Atlantic, many of whom

have settled down for days and weeks, and even months, to see my work. I have been overwhelmed by the kindest invitations to visit this continent, but till now I have never ventured across. This delay is an instance of British conservatism, for it is very little the fashion amongst us to take holidays. My American visitors have one and all impressed me with their possession of that feature of mind which in England I fear we do not possess—the power of judging any question solely upon its merits, and entirely apart from any prejudice, tradition or personal bias. No matter how we may struggle against it, tradition rules all we do; we cannot throw off its shackles, and I am bound to plead guilty to this weakness myself, perhaps as fully as any of my countrymen may be compelled to do. I may have broken free in some few places, but I know I am firmly bound in others, and my hope is that my visit to a freer country and a better climate may extend my mental vision.

To come to my intended illustration, let me briefly remind you of the early history of abdominal surgery. The first operation for the removal of an ovarian tumor was performed unwittingly in 1701, in a Scotch village, by Robert Houston, who began a tapping and finished by making a successful ovariectomy. It was not until 1809, eighty-six years after Houston's case was published, that his example was imitated, and even then it was not in Europe, but in the fresh soil of the backwoods of Kentucky that the young seedling obtained its first full growth, and from that time and from this country dates the history of abdominal surgery. But how slow the growth! In 1863 I heard my master, the Professor of Surgery in the University of Edinburgh, settle all this vast field of human progress in the few words, "Abdominal surgery is abdominal surgery." Syme, the greatest surgeon by far with whom I have ever come in contact, shared the views of his colleague in this matter, and I fear that in both of them the sentiments originated far less in the merits of the question before them than in their mutual dislike (almost the only sentiment they had in common) of John Lizars, who, having read McDowell's manuscript when it was sent to John Bell, was immensely struck by the success of the heroic Kentuckian, and was desirous of following his brilliant example. Most unfortunately for humanity the success of Lizars was of a very doubtful kind, and abdominal surgery had to wait for the advent of Dr. Charles Clay and Mr. Isaac Baker Brown. The story

of the latter brilliant and unfortunate surgeon is now a thrice-told tale, and I can only repeat here what I have said at length elsewhere, that his disastrous downfall was a misfortune for humanity, delaying, as it did, the progress of abdominal surgery for fully a quarter of a century. The whole question of this progress lay in the peculiarly narrow issue as to whether the pedicles of ovarian tumors should be dealt with inside the peritoneum or outside it. Here again the new country was first in the race, for between 1820 and 1830 the decision in favor of the intra-peritoneal treatment was given in America in such a way that the question ought never to have been reopened. The arbitrament of abdominal surgery between 1866 and 1876 was left in the hands of a man still living, and he carried through his practice a mortality so heavy as to be absolutely prohibitive of fresh enterprise. Mr. Baker Brown left off practice in 1866 with a mortality of ten per cent. with the cautery, whilst, after operating on a thousand cases, Sir Spencer Wells had a mortality of twelve per cent. with the ligature in the last hundred, and over the whole thousand the mortality was exactly twenty-five per cent. With such results as these the marvel is not that the conservative surgeons cried out twenty years ago that the craft was in danger, but that the removal of ovarian tumors ever became an accepted operation at all.

As I have said over and over again, and as I shall never tire of saying, to Keith is due the whole credit of the modern development of abdominal surgery, and it has ever seemed to me specially hard that while wealth and a title have been the lot of the man who had done nothing but obstruct progress, to the author of our present proud position nothing has come save a good deal of misrepresentation and abuse.

In 1873 the doctrines and practice of Lister, after twelve years of preaching on the part of their author, had penetrated to London and were taken up by Sir Spencer Wells and his assistants. I had practiced all the details in their ever-varying form, as recommended by Mr. Lister, from 1866 onwards, and gave them up, one after the other, as I found they disappointed and hindered me. Finally I gave the spray and its adjuncts a long and complete trial, a trial far more careful in its details than anything I ever saw elsewhere, this trial extending over three years. I have published in detail the disastrous results of this experiment, and at last I gave up all these

unnecessary dangers, and since January 1, 1881, my practice has been entirely free from all these details. Since then my example has been followed by Dr. Keith, Dr. Bantock, and by my colleague, Dr. Savage, and the only surgeon now who uses the Listerian details for abdominal surgery is Mr. Knowsley Thornton. He still claims for Listerism the most of our present progress in spite of the fact that Keith, Bantock, Savage and myself have all far better results without Listerism than Mr. Thornton has with it. Mr. Thornton went so far recently in a communication to Dr. Bigelow, which that gentleman published, as to say that his (Mr. Thornton's) bad results in hysterectomy were due to the fact that in this operation the Listerian details could not be effectually applied. But the facts of the practices of Mr. Thornton and Dr. Bantock, the two surgeons to the Samaritan Hospital, settle the question when they are contrasted. Mr. Thornton uses the Listerian details for hysterectomy as well as he can, and in twelve cases he has had five deaths, while Dr. Bantock does not use the Listerian details at all, and in twenty-two cases he has had only two deaths. The explanation of the difference will be evident to every one who has seen both of these gentlemen operate. To see Dr. Bantock do a hysterectomy is a lesson in surgery, and one from which I learnt a great deal.

To see my own work I have been honored with the visits of a large number of surgeons from this continent, some of whom I see here now. I believe they one and all came with the belief that they would find I had some secret antiseptic agent, the use of which was the explanation of my success. If I have such an agent it must be of universal existence in nature, for I have made some of my visitors take water from the tap and put it into the basins for the sponges and over the instruments and into the abdomen. I have made them drink it and have offered it to them for analysis, and so far I have not been detected in any exercise of magic. My visitors always ask to what I attribute my success, and I answer them I cannot tell. They frequently suggest that it is climate, and my answer is that our climate is the most variable and uncertain, the worst in the world. It is not fresh air, for the great majority of my operations, and always the worst, are done right in the middle of a large manufacturing town.

If I may formulate my own answers they would be briefly to this effect: I have given up my life to this work and I engage in no

other kind of practice, therefore I have a constant weekly experience of five or six of these operations, sometimes as many as eight or ten. I pay the most minute attention to every detail and maintain an absolute rule of iron over my nurses and my patients. I will not, if I can avoid it, operate in a private house, for there I have no control over either nurse or patient. I can best illustrate the extent to which I carry discipline by telling an incident which occurred recently of a kind of which I have had a few but not many experiences. For my private hospital I have a rule that when a patient is admitted she must go to bed immediately. A lady with an ovarian tumor arrived after a journey of some hundreds of miles, and was asked by the nurse told off for her to go to bed. She said she would not do so until she had seen me. The nurse assured her that I would not come near her till she was in bed. The patient remained obstinate, and I sent a message to her that she must either go to bed or go home again, and she elected to do the latter, with much satisfaction to myself. She doubtless thought, and you may think, the rule in question is an absurd one, but the absurdity is only on the surface. It is a test of the patient's obedience and confidence in me, and I know very well that with a patient who begins by disputing my orders and doubting the wisdom of my directions I never could get on, and therefore it is better for both that we should have an early parting. My nurses I always train myself; in fact, I will not have one who has had previous experience, for I know very well that such a woman will inevitably, to save herself trouble, do something in a way she has seen done elsewhere, and probably for some purpose altogether foreign to my intention, and will therefore become to me a source of danger and annoyance.

Finally, I give great personal attention to cleanliness in every detail of my work. I trust no nurses or servants without overlooking, and I am constantly and at unexpected times turning up carpets, taking down shelves and routing out cupboards. In this way, and by a process of weeding, I have obtained a large staff of good servants and have founded a large establishment in which every available precaution is secured. I can give no other reasons than these for my success, and probably they will commend themselves to you.

There are, however, some causes intrinsic to the work itself from which success has sprung to a large extent, of which a few words

may here be said with advantage. The first, of course, is the discontinuance of the clamp, of which I have said a great deal elsewhere. Whatever Sir Spencer Wells may say to the contrary, neither with nor without Listerism would anybody go back to the clamp. But the curious thing is that there are recent experiences in hysterectomy which would make it appear that it is not so much the clamp which has been to blame as Sir Spencer Well's methods of using it. Hysterectomy must always be a more serious operation than ovariectomy. Yet Dr. Bantock is now obtaining better results in removing the uterus with a clamp than Sir Spencer Wells ever got in removing simple ovarian tumors, and we must bear in mind that Sir Spencer always insisted that he used the clamp for his simplest cases—cases with long and easy pedicles.

Puzzling over the mysterious and startling contrast, I went to see Dr. Bantock operate, and amongst other things I found that he had given up using perchloride of iron for the purpose of tanning the stump. I asked him why he had done so, and he told me he was quite sure the use of the perchloride of iron had added greatly to the mortality of the clamp, because with a thick pedicle secured by the clamp it is impossible to close accurately the abdominal wound and prevent draining into the cavity. I did not at once accept Dr. Bantock's explanation, but I determined to use the perchloride of iron no more. Like everybody else, I was prejudiced in favor of the statement made by Sir Spencer Wells, that a putrefying stump would poison the wound, and therefore I could not make my mind to allow it to remain without some kind of interference. Years ago, in blaming the clamp for our high mortality, I had pointed out the likelihood of this incomplete closure as being one of the causes, if not the chief cause, of death. But I certainly did not suspect the perchloride of iron as being the fatal agent. A few days after my interview with Dr. Bantock I had to perform a hysterectomy, and I dressed the stump with crystals of thymol. The patient died of peritonitis on the fourth day, and that the thymol had trickled into her peritoneum and had poisoned her we had proof enough. Since then I have done hysterectomy twice without dressing the stump at all, and the patients are at present perfectly well. It will be curious, indeed, and no less instructive, if we find that Dr. Bantock is right, and that the use of perchloride of iron, the only contribution Sir Spencer Wells has ever made to abdominal surgery,

should turn out to be the cause of his tremendous mortality. In any case it is a remarkable example of how absurdly we are all governed by *a priori* statements—statements absolutely void of any arguments in support of them, but having been made by one with an authoritative name and position, are accepted without doubt. If Dr. Bantock's brilliant results are obtained by others in the same way—then we have been going on destroying women with perchloride of iron merely because Sir Spencer Wells said we should use it.

As the whole aspect of abdominal surgery is at the present moment controversial, as the progress and practice of this part of our art form the chief objects of my life, you need not be surprised if I have made this address somewhat of a polemic. The greatness of the opportunity, the fact that an address given to you will be read where mere utterances of mine would be passed by, obliged me to take advantage of the opportunity you have given me to carry on the discussion. The course of this particular line of work has, as you know, taken a sudden bound of activity within the last few years, and the reason is a very simple one. The immense success in the removal of ovarian tumors such as threatened to destroy life with absolute certainty which followed the efforts of Mr. Baker Brown and Dr. Keith led some of us—myself especially—to venture into regions where life was not necessarily, or at least not apparently threatened, but where suffering was persistent and incurable, and where the sufferers had been proved by protracted trial to be outside the powers of ordinary remedial measures. In a recent paper by Sir Spencer Wells, published in the *Medical Times and Gazette* "*usteron proteron*" fashion, and therefore I must here give a little attention to the views of that writer. He tells us that ovariectomy had at one time a mortality of seventy or eighty per cent., but I know not whence he gets his information. Doubtless it would be possible to find occasional examples of surgeons with limited experience having such a heavy death-rate, but such an isolated case would not yield a fair statement of the facts. I read a few months ago in an American medical journal that in Italy there had been one hundred cases operated upon with sixty-three deaths, and the newspaper recorded the fact that "thirty-four surgeons were engaged in the sanguinary work." But when the work of men who can be called ovariectomists is examined no such results are seen. Charles Clay was the first man who did an ovariectomy in

England, and his maximum of mortality in his first series of cases was forty per cent., but it speedily fell to twenty-five per cent., and this is very much what has been recorded by Sir Spencer Wells of his own practice.

In the paper of which I am speaking Sir Spencer goes on to say that "afterwards when the strictest hygienic precautions were supplemented by antiseptics and improvements in operative details were generally adopted success became so great that ovariectomy not only took its stand as by far the most successful of any capital operation in surgery, but the risk attending it in a favorable case could truly be calculated as little, if at all, greater than that attending any case of natural childbirth, and as a necessary consequence early operations could be advised with less hesitation." The statements in this sentence are wrong from beginning to end. In the first place the mortality of ovariectomy in the hands of Keith and myself still remains at or about three per cent., and we have shown the least mortality yet available. The mortality of natural labor, on the other hand, is certainly not twenty-five per cent. The statement that diminished mortality has led to early operations should be exactly reversed, for it is the early removal of tumors and the discontinuance of tapping which have largely contributed to our present splendid results. Sir Spencer Well's teaching inculcated the practice of tapping and its repetition until the patient was within measurable distance of the grave; but his successors have reversed all this with infinite advantage to their patients, and we now look upon tapping as a sort of surgical crime. This material alteration in practice led us step by step in the direction I have previously indicated, and we began to discuss the greater advantage to which I have just alluded. Every specialist is familiar with a large class of miserable women who wander about from hospital to hospital or from consulting-room to consulting-room seeking relief from their ailments unavailingly.

Let me take the first class to which Sir Spencer Wells alludes in his recent paper—cases of uterine myoma. There can be no doubt that there are hundreds of uterine tumors that give no trouble at all, but these are not the cases that come to us. If a woman has no pelvic trouble she does not present herself to the gynecologist, and if she has a uterine tumor which gives rise to no symptoms, that tumor of course remains undiscovered; but when she suffers from

distress occasioned by pressure on viscera from severe hemorrhage or increasing size she comes to us and asks for advice. Suppose we find her to be suffering from a uterine myoma, what are we to do? The answer to this question is like the answer to every other of a similar kind—each patient must be advised according to the circumstances of her case. If the tumor is small and the woman comparatively near her climacteric, and the hemorrhage such as can be moderated by a rest in bed and the use of ergot, then she should be advised to let the tumor alone. But if the woman be not near her climacteric, and the hemorrhage does not yield to treatment, especially if after a fair trial of treatment the tumor is found to be actively going on, then surgical treatment is demanded.

Of course every practitioner of medicine and surgery does and alwas must carry on his work in his own way, and there can be no doubt that within certain limits the measure of his success stamps the rightness or the wrongness of his methods. James Syme used to teach us that there were three methods to conduct our professional business, but that there was only one way to real success. He said there were three interests involved. First in order, that of the patient; second, that of the professional colleague; and third, that of the practitioner himself. Syme insisted that the several interests should be rigidly kept in the order in which he placed them or things would be sure to go wrong. I have never heard sounder advice, and have never lost sight of it, and so far as within me lay I have striven to follow it. In the proposals of a new proceeding two dangers clearly occur—the first, that of the enthusiastic upholder of the novelty, who may be disposed to run too fast in the new line; the second is that of the obstructive who, merely a believer in the times that are past, can see no possibility of their improvement. The remedy for the first danger is a wholesome scepticism leading into just and careful criticism; the remedy for the second is more difficult, for it involves a patient endurance of much misrepresentation and a protracted combat upon the points of criticism which have no weight in themselves, and have an importance gained only by persistent reiteration. In the line of practice of which I am about to speak the point most persistently urged against our new line of practice is that unnecessary operations are performed. Now this is an argument which it is extremely difficult to argue upon, because those who speak on the two sides of the

question start from altogether different standpoints. Those of a past generation, like Sir Spencer Wells, apparently regard it as justifiable to perform operations in this department of abdominal surgery only when life is pronouncedly in danger, whereas on the contrary we of the younger school believe we are justified in extending our practice for the relief of suffering, and we regard this as a higher function than that of the mere saving of life. To end the discussion of this point I would point out that our critics endeavor to apply an arbitrary rule for the repression of abdominal surgery which has never yet been applied in any other department of the art. Let me ask, if we find a man suffering slightly with the early symptoms of a small calculus, do we not at once proceed to relieve him by removing it from his bladder? In fact, in the domain of what is called general surgery, has it not become an established practice to perform operations which are accompanied by very considerable risk of life merely for the rectification of deformities—such as bow-leg and knock-knee—which have not the remotest risk of life attached to them and which involve no kind of suffering? The ultimate court of appeal therefore comes to be the patient's own decision, and I do not find that patients prefer to go on suffering pain and the disabling effects of profuse loss of blood rather than submit to a surgical operation, the details and effects and ascertained risks of which are completely and candidly placed before them.

In the treatment of uterine myoma two alternatives occur, and these are both the subjects of very hot discussion on my own side of the Atlantic; they are removal of the uterine appendages and removal of the uterine tumor itself by the so-called supravaginal hysterectomy.

No one in Europe, at least only one authority so far as I know of any importance, doubts that removal of the uterine appendages arrests menstruation completely in the great majority of instances, arrests the growth of uterine myoma generally, causes it to shrivel up, and in many instances actually to disappear. Mr. Knowsley Thornton, Dr. Savage, Prof. Hegar, myself and others have reported numerous cases in detail. I have published a long series in *The American Journal of the Medical Sciences* for January, 1882, but Sir Spencer Wells dismisses us all in the brief sentence, "Vague, unsupported assertions have little influence upon the opinion of a

thoughtful or a sceptical profession." Sir Spencer Wells must pass his retirement in some other way than in perusing the modern literature of his specialty, and therefore his criticism need hardly engage our attention seriously.

The great majority of cases of uterine myoma which come to us for surgical treatment can be quite satisfactorily dealt with by removal of the appendages, and it is an operation having a small and a steadily diminishing mortality. The arguments used against it are, first, that of its mortality, but this mortality is the inevitable death-rate of early work, and it is therefore not a permanent objection. It was an objection urged twenty-five years ago against ovariectomy, but against that operation it no longer holds good. The second objection is that myoma itself is not a fatal disease, but this is not an argument in harmony with my own experience. Even if it were a just one, however, it is admirably met by a plea entered at Ryde, in the discussion of my paper on the subject, to the effect that it is to the rights and relief of the majority that we must have regard, and that the function of our profession does not end with the saving of life, but it is chiefly that of relieving suffering.

Two other objections have been urged generally against the removal of uterine appendages that it sterilizes the patient and destroys their sexual appetites. Of course a woman is completely sterilized by a uterine myoma ninety-nine times out of one hundred, so that the process of complete destruction of fertility is a matter of little moment. The other objection has been shown to be perfectly groundless, and even if it were not so it could hardly be urged on the ground of mortality that a woman should go on suffering because she ought not to suffer any diminution of that animal propensity which it is the chief object of the higher life of all religious culture to subject, and the subjection of which forms for all creatures the greatest difficulty of existence.

There are cases of myoma demanding surgical treatment upon which removal of the uterine appendages seems to exercise no satisfactory influence. Mr. Knowsley Thornton has made a very valuable suggestion, one which certainly deserves very careful consideration, that all cases of myoma requiring interference should first be subjected to removal of the uterine appendages and then to subsequent operation if it should be found necessary. The only objection to this that I can offer at present is an incomplete one. I have

pretty well satisfied myself that there is one form of myoma on which removal of the uterine appendages exercises no control, a variety which I have named the soft œdematous myoma. But it is not easy to recognize this form of myoma until it has been removed. Again, there are a few cases, very few I have found them to be, in which the appendages cannot be removed, and we must proceed to hysterectomy. Finally, the removal of uterine tumors has had such brilliant results in Bantock's hands that I am in hope that a new era for hysterectomy has been opened out.

Another class of cases wandering about seeking relief are those upon which I have operated in large numbers, and have found chronic and incurable disease of the appendages in the form of chronic inflammation of the ovary, chronic inflammation and occlusion of the tubes, these latter being occluded and distended by serum, pus or blood. When I first published my work on this subject there was, of course, a large amount of incredulity expressed about it, and this incredulity was not much lessened by the exhibition of a large number of specimens at various societies and their permanent exhibition in the museums of the Colleges of Surgeons. Many, particularly amongst my metropolitan brethren, loudly asserted that there were no such diseases, and Sir Spencer Wells stated, at the International Medical Congress in London, that if such diseases did occur, they must all go to Birmingham. But Dr. Kingston Fowler has shown not only that they exist in London, but that they are far more fatal than I had any idea of, and that they have been and are overlooked and misunderstood in my own practice previous to 1878. Concerning this incredulity please distinctly understand that I do not blame anyone for it; it is a necessary part of all human progress. I do not even blame my metropolitan brethren, as they seem to think I do, for not discovering these cases and properly treating them. That is the fault of the mechanical school of gynæcology established by Simpson, and which exercises a far too great influence over this department of our art. During the last twenty years displacements have had a great run, just as before that time everything was put down to ulceration, and no man considered himself properly armed for the treatment of disease unless he carried a speculum and a caustic stick about with him in his gig. The mechanical school revels in the sound and the pessary, both useful enough in their proper places, but when misused are capable of endless mischief, for many of the so-called displacements are now known to be

constituted by chronically inflamed and adherent tubes and ovaries capable of relief only by their removal.

You will ask me at starting to tell you how these diseases may be recognized, and I have to answer that their diagnosis cannot now, and probably never may be, a matter of certainty. They begin generally in some acute attack of pelvic inflammation, from which the patient dates all her troubles, and when you get such a distinct history you ought at once to be on your guard. This illness may have arisen, for instance, in a clearly defined and confessed attack of gonorrhœa, or it may be an attack of pelvic perimetritis occurring after a miscarriage or a labor, or it may have arisen in one of the exanthematic fevers or a simple cold. In some of the cases, however, you get no clear starting-point in the history, and then the diagnosis is generally more difficult. The symptoms are usually precise enough, yet unfortunately none of them is peculiar to the condition of which we are speaking. Pain is, of course, a leading feature, as indeed it is rarely without pain as a chief incentive that patients consult us at all. This pain is complained of as being constantly present, greatly aggravated by walking and becoming intense for some hours or days before the period and lasting throughout its continuance. Menstruation is usually too frequent and too profuse. In the great majority of the cases the uterus is somewhat fixed, and a tender mass can be felt at one or other side of it, perhaps on both sides, and behind it. When the tubes and ovaries are down behind the uterus and adherent there, and this is by far the most common condition, the diagnosis to a beginner is extremely difficult. Nothing looks more certain and easy than the diagnosis of subinvolution and retroflexion, and without further consideration a pessary is introduced with no other result than that of aggravating the patient's sufferings; in fact, I may say that at this point her troubles will begin to be serious, and she will wander about collecting various kinds of instruments from various practitioners until she ends either a helpless or hopeless invalid, or dies from an attack of acute peritonitis.

In some of my most marked and most successful cases there have been no physical signs at all, and I have felt myself reluctantly justified in interfering only by the manifest reality of the patient's sufferings.

Here let me just say a word about the much discussed question of subjective symptoms. Everybody has heard of the celebrated story

told of Liston, that a hysterical girl persuaded him to remove a healthy limb for supposed disease of the knee-joint. But is there any other story of the kind known? If there is, I have not come across it. We certainly do meet with women who will tell incredible stories about their sufferings, but the stories are so inconsequent and contradictory that there is no difficulty in discounting them. Besides, they have no support from the presence of corresponding physical signs. A woman whose sufferings are real has a sequent narrative and will submit to treatment, while the woman who is a humbug flies off at a tangent the moment a suggestion is made that she should submit to an operation in which she risks her life. I have never yet known a woman submit to an abdominal section in whom I did not find abundant justification for its performance, even in cases in which I had been extremely doubtful about its real necessity before I undertook it. I have known many patients to whom I have made the proposal as a test of their reality, and who, much to my satisfaction, have speedily taken themselves off to some other practitioner.

As to the details of the operations in these cases I have no time here to speak; indeed, I could deal with them satisfactorily only in a series of lectures. Suffice it to say that the operations are very difficult, for the structures are always extremely adherent, and the operator has nothing to guide him save the erudition of his touch. Concerning the cases of occluded and distended tubes some of my critics have suggested, without any experience, that something short of abdominal section might suffice for their successful treatment, such as tapping the tubes from the vagina; but a trial of this proceeding long ago satisfied me of its impracticability and its uselessness, and my growing experience constantly confirms me in the conclusion that we have no alternative.

I am often asked concerning the subsequent history of these cases, and I am able to say from the published details that the great majority of them are relieved at once and completely by the operation. In some of them there remains a tenderness of the stumps, lasting for some months. In four very bad cases fecal fistulæ had formed, and in two the sinuses have healed and the patients are perfectly well. In the third case the fistula opens still at occasional intervals, and in the fourth case, by far the worst I have ever had, the patient being literally at death's door when the operation was per-

formed, the fistula still remains open, some twelve months after the operation, and even here her health has so greatly improved that I am hopeful of its permanent closure in time.

I have occupied your time already at too great length, and yet have left myself no time whatever to speak of a great variety of topics within the limits of the subject of my address of which I fain would have spoken—subjects entirely novel and full of the deepest interest alike to the practical surgeon and to him who takes but an interest of a literary kind in the progress of our art. In fact, it is a matter of regret to me that I cannot address such an audience as this in a series of lectures, rather than in an address which must necessarily be brief. It is one of the great defects of a position such as I hold—a defect inherent in a special line of practice—that it practically shuts out its follower from any chance of being a teacher. Besides, I feel strongly this as acting to my own prejudice, and I am certain it is a misfortune that those who, like myself, are very largely engaged in work strictly limited to a department can never communicate as successfully the results of their experience as can those who are engaged in teaching. I regret, therefore, that I must pass over without mention the important field of new work which has been opened up within the last few years in the surgical treatment of the liver, spleen, kidney and intestines. I cannot even stop to speak of many other less striking but no less important subjects, such as the treatment of pelvic abscesses by abdominal section and drainage, though all these are of less importance in so far that they excite but little hostility; and what I have to say to you further I purpose to limit to a brief discussion of a proposal made by Dr. Robert Battey for the production artificially of the menopause for the purpose of indirectly benefiting patients suffering from conditions more or less neurotic, the symptoms of which are apparently influenced by the recurrence of menstruation.

It must be perfectly clear to the most casual observer that this is a field of an extremely ill-defined character, one which at first sight offers but very intangible prospects of success, and in which the indications even of success must be very vague and indefinite. There can be no doubt that a large number of women suffer in such a way as to make it perfectly clear that if they were relieved from recurrent menstruation they would be improved, but there can be

no doubt that the application of this idea—in itself a brilliant one—requires the utmost care. I have no sympathy with stupid obstructionists who, because they scent danger in the air, would absolutely prohibit its application ; but I have sufficient regard for the expression of every kind of professional opinion to recognize the necessity for the full exercise of caution.

When the proposal was first made I recognized this so fully that I selected for whatever experiments I should make in this direction a disease concerning the reality of which there could be no doubt whatever—I mean epilepsy. It is a perfectly easy thing to recognize by two facts alone any case of genuine epilepsy from mere hysterical imitation. It was, I think, Dr. John Hughes Bennett who clearly established the facts that none but the true epileptics ever seriously hurt themselves during the attacks, and that after the fits are over the epileptic is always somnolent. It is certainly the case that in a large number of cases of epilepsy in women the incidence of the disease is concurrent with menstruation. It is also true that every epileptic woman whose case I have investigated is worse during the menstrual week than at any other time. In some cases the epilepsy is absolutely limited to those days of the month during which the menstrual flow is in existence. It was therefore a perfectly easy thing to select a number of cases in which the experiment of Battey's operation seemed capable of justification.* For the purpose of trying the experiment I selected six cases, and to these I have absolutely limited its application, though from the number of patients who have been sent to me for the specific purpose of having the operation performed, I suppose I might have been able, by this time, to have placed several scores of attempts on record. The reason of my careful restriction has been that I do not care to prejudice the results of my other work by complicating it

* Dr. Thallon, of New York, has lately published an article in Seguin's *Archives* which is an admirable illustration of the Teutonic process of elaborating a camel from the inner consciousness of the writer. Dr. Thallon seems never to have read what either Dr. Battey or I have written on this subject, and he has created a new term, against which I desire to enter a vigorous protest. He speaks of the "Battey-Tait" operation. There is no such thing. Dr. Battey's proposal is as different in its purpose, in its details and in its application from my own as lithotomy and amputation. I need not enter into the further details of Dr. Thallon's criticism and conclusions, as they are reached solely by the utter absence of experience of the matters on which he has chosen to write.

with what seemed to me a doubtful kind of proceeding ; but all my care has been to some extent fruitless, for I have been persistently charged by a certain class of writers with having performed a large number of useless and unnecessary operations in removing normal ovaries in women suffering from nervous disorders. Indeed, so late as July 5th last Sir Spencer Wells wrote the following sentences which, though they may have been intended for some one else, I cannot help but suspect were levelled at me. They run as follows :

“Just now something more than a word of caution against rash, dangerous and unnecessary operations are called for. We are startled by the reports of removal of normal ovaries of young women suffering from nervous disorders, which may be exaggerated or imaginary, and it is to be feared that our professional honor is at stake and that abdominal surgery, in its latest developments, is open to the denunciation hurled against the early ovariologists, and that with more reason than in 1850 Lawrence’s question must be repeated whether such operations can be encouraged and continued without danger to the character of the profession ; and West’s assertion that the fundamental principle of medical morality is outraged cannot now be satisfactorily refuted.”

Though I am fairly familiar with the literature of abdominal surgery during the last ten years, I am absolutely ignorant of anything which can possibly justify such ridiculous exaggeration. I have publicly challenged Sir Spencer Wells to indicate the proceedings to which he alludes and to produce the evidence upon which he bases his charges, but up to the moment of my leaving England he had not taken up the gauntlet. It is a somewhat remarkable fact that in another journal, in the same month, the same writer actually pleaded in favor of the removal of tubercular lungs ; that such an operation would be justifiable if it saved one patient in twenty of those operated upon, and it seems to me absolutely impossible to reconcile such a recommendation with the denunciation I have just read.

So far as my own work in Battey’s operation is concerned, in not a single one of the six patients operated upon were the uterine appendages normal. In two of them, typical examples of cirrhosis, the pathological anatomy was carefully investigated by independent observers, one of whom was the well-known and accomplished pathologist, Mr. Alban Doran, by whom the appearances were fully

described and figured in the *British Medical Journal* for November 8, 1879. The results of these operations, in the first place, were that all the patients made easy and uninterrupted recoveries; the operations were performed after the most careful consultation and with the full cognizance on the part of the patients and their friends of the results which were certain and the entirely speculative nature of those it was hoped would be obtained. As I have already published the cases in detail, with the exception of the last, which was performed only a few weeks ago, I need not here repeat them save in general terms, and that is to the effect that in two cases the results are such as to justify completely the proceedings. In both of these the disease before the operation was so intense that it was threatening life, but now it is almost entirely subdued and the health of the patients has been transformed from a wretchedly feeble, anæmic and broken-down girl into a healthy and robust woman, although affected by epilepsy almost as badly as before. In two others the disease has been greatly modified and the health of the patients has been immensely benefited.

From this brief record it is quite a matter open for discussion as to whether the continuance of the proceeding can be recommended, and I am bound to say that I have not myself a very strong opinion in the affirmative; but I think if I had a daughter with feeble health, the result of pronounced menstrual epilepsy, I think I would advise her to have the operation performed. From what I have seen of it myself I think there can hardly be any risk about it, and if performed with the precautions I have indicated I do not think it can be brought under the sweeping category of Sir Spencer Wells as being either rash, dangerous or unnecessary.

There is another argument, and I think one that may be said to have some moral force, in that, as it will assist in the prevention of the distinctly pronounced hereditary tendency of the disease, we should at least hesitate before we entirely condemn it. Certainly a great deal more can be said for it than for the proposal of pneumotomy for phthisis on the assumption that the removal of a lung would only save one patient out of twenty. Removal of the uterine appendages for epilepsy would probably not kill more than one per cent., and I am certain it would materially relieve fifty per cent.; it would improve the health of the great majority of patients, and I do not think it would make any of them worse than they were

before the operation. I am hopeful, therefore, that the verdict of professional opinion will not be adverse to a fair and reasonable trial of Dr. Battey's proposal, and I trust that the freedom from the prejudice and shackles of tradition which we find on this side of the Atlantic will secure for it a fair field.

And now, in conclusion, let me thank you most sincerely, and not only you, but many other professional bodies and large numbers of professional friends, for the kindly, I may say overwhelming reception I have met with at your hands. For many months before I left home there was hardly a mail arrived which did not bring me invitations of public or private hospitality, and these brought forth feelings of regret that my stay on this continent could not be prolonged for as many months as it will have to be limited to days. One thing I recognize in this above all others, and it is that you are treating me not on my own merits, but as a representative of a large body of men in my own country, to whom you have owed much in the past and with whom you are in the present united in a common bond of brotherhood and community of sacred purpose. For the future I predict that the unity and the union will be more and more complete. If it should be in the mind of any that in what I have said I have been lacking in detail, let me say again that the theme you gave me was far too wide to be satisfactorily and completely dealt with in one address. If, on the other hand, I should be adversely criticised as having spoken strongly upon matters in dispute, let my apology be that I have worked hard and long and earnestly in the field I have undertaken, and that no man can feel strongly without infusing into his words some tincture of the thoughts that govern his actions.—*The Canadian Practitioner.*

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE CRISIS IN THE LAW REGULATING THE PRACTICE OF MEDICINE AND SURGERY, AND OUR OPPORTUNITY.

There is expected to be a very large gathering of people at the Exposition. The "New-Found Land of Carolina" has excited a great deal of interest abroad, and the representative of every neighborhood having a fallow rice-field, or good tar-kiln land, or a water-power, or a huckle-berry swamp, or a gold-mine, or anything of the many valuable properties known to exist in said "New-Found Land" will be there with specimens of the soil and products. How will they ever be able to give examples of our delightful climate from Jumping Run to Cranberry? At any rate everyone is expected to be there, and we trust that the representatives of the medical profession will be there to make known the desires, intentions and necessities of the law regulating the practice of medicine. There

is no doubt that if the proper effort is made the needed amendments of the law may be accomplished.

The law under which the Board of Examiners acts is no longer adequate to the needs of the times. Twenty-five years ago it was accepted as a compromise, and adopted as an experiment by all but the courageous body of doctors who memorialized the Legislature. With unfaltering faith and determination they have caused the legislator's experiment to bring in bounteous returns, by vivifying a law which would otherwise have fallen still-born.

This great gathering of the people furnishes a good opportunity to develop a sound public opinion upon the subject, and we trust that every legalized physician in the State will do his share of the work of informing the people.

The Board of Health has issued a pamphlet on one of the aspects of medical practice, and as many copies will be forwarded to any address as may be desired, on application to the office of this JOURNAL.

This pamphlet sets forth the objects attained already by the Board of Examiners, giving in full the report of Dr. H. T. Bahnson, ex-Secretary of that body. It also shows what other States are doing; more particularly it gives side by side the analagous clauses in our law and in the recent law of Virginia; furthermore, the penalty clauses in the laws regulating the practice of medicine in several States are given. For this latter part of the pamphlet the author acknowledges his indebtedness to the complete "Report of the Illinois State Board of Health."

We are satisfied that we have reached a crisis in the existence of our law, and that a concentrated effort from every county in the State will secure for it such a revision as our experience has long taught us to be absolutely demanded.

THE INFLUENCE OF CIVILIZATION ON EYE-SIGHT.

We find in *The (London) Times* an elaborate article on the above subject by Mr. Brudenell Carter, which was drawn forth by the

desire of the Medical Society of London that he should defend at a conference upon "Over-pressure in Schools" held at the Health Exhibition, the proposition that "long hours of confinement in what is too often a vitiated atmosphere, coupled with the other ordinary conditions of school work and discipline, exert a hurtful influence upon the physical development of the frame, especially upon the heart and lungs and upon the organs of vision, and that this influence is so considerable that it must be regarded as a matter of national importance."

Mr. Carter is a well-known ophthalmologist, and his observations deserve the most patient consideration. We have therefore attempted to bring it to the attention of our readers as concisely as possible, because it is a masterly handling of an old subject, divested of all the sensational and distorted views too often displayed in "sanitary" writing.

"The evil effects of some kinds of schooling upon sight and upon the development of the eyes, form only a part, and probably not a chief part, of similar effects, which are incident to many conditions of civilized life, as these are brought to bear upon adults and upon children." The conditions in question would admit of being modified, and the chief requirement is the direction, to the eyes and their functions, of the same amount and kind of attention which is at present bestowed upon other physical capabilities of the human race. National neglect of the culture of the eyes is due to the ignorance which prevails concerning the proper range and scope of the visual function, and hence concerning the powers which the eyes ought to possess.

"To quote what I have written elsewhere, few things are more remarkable than the imperfection of common knowledge about all matters which relate to the use and functions of these important organs. In most other respects it may be said that the majority of parents have a fair notion of what ought to be the average capabilities of children. They know, approximately at least, how far a boy of ten years old could reasonably be expected to walk, how high or how far he could jump, how fast he could run, what weight he could carry, what force he could exert. There is not one parent in five hundred who has the smallest notion how large an object, say a capital letter, a boy ought to be able to see clearly at one hundred feet away; or who could tell at what distance he ought to be able

to see and describe the characters of an object of given magnitude. There is not one parent in five hundred who can say off-hand whether his children possess natural acuteness of vision, or to whom the phrase, 'natural acuteness of vision,' would convey any definite idea. There is not one parent in five hundred who can tell whether his children possess natural color vision; or who, if the inquiry were suggested to him, would know how to discover the truth."

Mr. Carter goes on to show that acuteness of vision among the savages and foresters far exceeds that of the town-bred gentleman, and narrates a story of the Indian guide who accompanied Humboldt in his travels in the mountains of South America, who was able to see human figures distinctly at a distance so great that Humboldt required the use of a telescope. This is a well-known fact, having many illustrations in the persons of sailors, and fishermen, and notably among the American Indians.

In order to understand the practical bearings of the subject it is not necessary to have any minute knowledge of either optics or anatomy, but it is necessary to have a general notion of the way in which seeing is accomplished. He illustrates the process of vision by the familiar example of the photographer's camera, and the process of reception of the image on the screen. Although a very familiar illustration, Mr. Carter has succeeded in making it clear enough for the general reader to comprehend it readily.

Mr. Carter makes use of the evolution theory to account for the present state of the acuity of vision of man. He thinks that "it requires but a small exercise of the scientific imagination to go back to the time when the common ancestor of man and of many other animals was in the visual condition which we now see exemplified in the earthworm—that is to say, possessing at its anterior extremity a nerve covered by the common integument of the body, but capable of being stimulated to sensation by the influence of light." It seems to us that so far from making his description clearer by the interpolation of such a theory, he has taxed the faith of all his readers except those who are already avowed evolutionists.

He believes "that in civilized man, from sheer neglect and lack of cultivation, it [vision] has fallen below the standard which savages still maintain, and to which civilized men might probably in time return, if they would but take the pains to do so. The great acuteness of vision of some of the lower animals is manifestly

associated with a remarkable development of the nervous organs which minister to the color sense, and there are therefore three directions in which the human eye might be improved by wisely-guided evolution. The retinal range of acute vision might be enlarged, and within that region vision might be rendered more acute, first by a finer structure of the nerve terminations and by an increase of the number of cones relatively to the rods; and secondly, by a development of special organs of color sense."

Complete statistics are wanting as to the proportion of school-children having defective vision. Dr. Cohn, of Breslau, in the years 1864 and 1865 examined 10,060 scholars and found 1,630 of them with eyes of defective shape. Of these 1,072 were myopic, 139 were flat-eyed, 23 were the subjects of astigmatism, and 396 were suffering from the results of previous disease. American observations have shown not only that flat eyes have a tendency, from the strain upon them by their defect, to pass into the opposite condition of short sight, but also that this change occurs with the greatest certainty in the under-fed or unhealthy children, and in schools where sanitary conditions are neglected.

The inconveniences and embarrassments of our modern civilization meet us at every turn, and are no doubt great; but who is able to say to what extent these discoveries in aberrant vision are due to the greater skill in improved instruments in diagnosis, rather than to the sole influences of occupation. Doubtless if there was any way to determine this last element, the figures above given would not have their present significance.

Such clear lessons in the science of vision cannot fail to attract attention of the public, and influence careless or neglectful parents apply the advice intended to be inculcated.

MR. LAWSON TAIT'S address, which we present in full, may strike our readers with surprise, excepting those who may have read carefully all of the severe strictures which have appeared in the London journals upon his work done in Birmingham. The articles referred to have even impeached Mr. Tait's veracity. He speaks to an American audience with the freedom which our free air of science inspires him, and whether he is wholly right in his personalities we

do not know ; we only know that he is wrong in some of his historical statements, and rather unappreciative of the eminent part which Americans have borne in his department of surgery. We are willing to accord him a high position in his special department, and can safely let the practiced readers of our pages determine the points in controversy according to their own lights.

REVIEWS AND BOOK NOTICES.

A TEXT-BOOK OF PRACTICAL MEDICINE. Designed for the Use of Students and Practitioners of Medicine. By ALFRED L. LOOMIS, M.D., LL.D. With 211 Illustrations. New York: William Wood & Co. 1884. Price \$6.00 and \$7.00.

The author of this volume is the well-known Professor of Pathology and Practice of Medicine in the University of New York. Numerous classes taught by him have extended his fame as a teacher of diagnosis, and as a lecturer possessing ability in imparting knowledge. This work, the author says, is "practically a revision and an elaboration of his lectures."

The introductory chapter of eight pages, on the principles of medicine, is devoted to the study of inflammation in the serous and mucous surfaces, parenchymatous and interstitial inflammation, and "the fate of pus."

The arrangement of the volume is simple and convenient. The *first section* describes diseases of the respiratory organ ; the *second* diseases of the digestive system, including diseases of the liver, spleen and pancreas ; the *third* diseases of the heart, bloodvessels and kidneys ; *section four* treats under the head of acute general diseases, miasmatic contagious diseases, acute contagious diseases, and malarial diseases are also considered ; *section five*, on chronic general diseases, embraces rheumatism, gout, diabetes, anemia, chlorosis, progressive pernicious anemia, leucocythemia, Addison's disease, scurvy, scrofula, syphilis, etc., etc. ; and *section six* concludes with diseases of the nervous system. Such an arrangement is easy to

carry in the mind and is practically better than tying fast to a complicated scheme of nosology.

To review a book after a short acquaintance with it, is one of the necessities of medical journalism. Our readers want to know what we think of this and that new book, whether it would be worth adding to their library, etc., and so many times we give our first impressions while the book is fresh before us, and in a time shorter than it would be possible to make a critical analysis. Some books, though, address themselves at once to our understanding, and lead one along so ably, that it would be hardly possible to go far wrong in giving an opinion. This latter remark applies to Loomis' Practice. There is no long, difficult preliminary of general principles to weary the student out before he reaches the description of special diseases. In this matter we have one suggestion to make—it is this: The undergraduate, and post-graduate, student, should be well grounded in the use of the clinical thermometer. They should be taught that no physician can be an expert who does not closely, faithfully and habitually study the revelations disclosed by the thermometer. It is not enough that in acute diseases he should anxiously ply his thermometer and go through the rather conspicuous (only to be so considered because not habitual) performance of keeping a daily clinical chart, and ignore it when he was to deal with a chronic case—say a spinal abscess—but this little instrument should be made so familiar because it must now be considered indispensable. It is true there are a few special works on the diagnostic and prognostic revelations of the thermometer, but any work on practice is greatly enhanced by a well-written chapter on this subject. But to return from this diversion: One of the features which first appeals to our judgment is the admirable use made of illustrations in impressing the generic examples of disease. For instance, the lesions in typhoid fever are made more real by representations of the ileum in the first, second and third weeks of the fever, and by a sketch of enlarged mesenteric lymphatic glands. To physicians who seldom have opportunities for refreshing their knowledge by a resort to post-mortem examinations, such aids will be highly appreciated.

In mentioning the necessity of special teaching on the application of the clinical thermometer we trust that we did not create the impression that the thermometry of disease is neglected, for this is by

no means the case. Numerous thermograms are introduced wherever necessary to mark the pyrexia of diseases, and this is as marked a feature as the illustrations in pathology.

In physical diagnosis this volume is very helpful. The schematic drawings illustrating the nature and causes of physical signs shows at a glance that which the most skilful master of technical language might fail to impress.

To the physician who has to deal much with malarial diseases the therapeutics of this volume will be highly appreciated. Especially, upon the uses of quinine, Professor Loomis gives imperative and correct instructions. We notice with peculiar gratification that he has given the study of malarial diseases more attention than it has received from Northern professors, with the exception of Dr. Flint, since Dr. George B. Wood's day. The light which the thermometer has thrown upon the nature of these wide-spread maladies has so materially marked out the indications for treatment that it has entirely broken down the prejudice with which the Southern treatment of them was formerly viewed.

We cannot agree with Dr. Loomis in one of his reasons for abandoning depletion in intermittent fevers. He says: "Those living in malarial districts are never up to the normal standard of vigor, and, consequently, are in a condition to be affected unfavorably by any plan of treatment or by any remedial agents which shall enfeeble the vital powers." It is true that whenever one gets sick in a malarial section, or even if he should meet with a surgical accident, the man of experience is prepared to expect a malarial complication; but there is as much vigor and endurance among the acclimated population in general as one finds elsewhere. We doubt if the proportion of tuberculous persons in a non-malarial northern climate would not exceed the number of persons under the normal standard of health from malarial toxæmia.

The use of quinine in reducing the fever in chronic pulmonary phthisis, while it is not new, is revived with such confident statements as to its effects, that it is quite encouraging to read what is said about it. (P. 199.) Dr. Loomis gives 20 grains alternate mornings, but finds that it has little antipyretic effect when the patient is taking exercise, and therefore rest and quinine go together. "Even when cavities are forming its administration will often be followed by a lower temperature. It seems to check the process of

consolidation and limit bronchial catarrhs. Digitalis exercises no antipyretic power, and only temporarily increases heart-power in phthisis. * * * One-tenth of a grain of morphine combined with quinine increases its antipyretic power, so much so that I now rarely give quinine as an antipyretic to phthisical patients without it."

It deserves to be especially noticed how clearly Prof. Loomis has brought out the subject of the diagnosis of heart-disease. It is well known that most medical students and practitioners, too, for that matter, do a great deal of groping over the diagnosis of disease of the heart. Most of them are willing to take the hint from Trousseau ("the exact seat of cardiac lesion is a study more interesting than useful") and be satisfied with knowing that their patient has a diseased valve, without feeling specially at fault in not being able to determine which. But here we find what will be a great boon to those physicians who are conscientiously striving to be more accurate in diagnosis, viz: a clearly and graphically written description of diseases of the heart, illustrated by helpful diagrams, and each disease carefully differentiated. We predict that wherever found on the office table of the student-doctor, one will have no difficulty in turning at once to the 87 pages devoted to diseases of the heart, with no other guide than their thumb-stained and hernial condition.

We notice a blunder of page 759 which escaped the reviser. The author says: "*In 1776 Sir William Jenner observed that in some of the northern countries of England persons employed in dairies, who suffered from a certain form of ulcer upon their hands, did not contract small-pox when exposed to it.*"

It is very apparent that the author referred to *Edward*, and not Sir William Jenner. The date also is wrong, for in 1770 Edward Jenner went to London to pursue his studies under John Hunter, and it was as early as this that he mentioned his knowledge of the cow-pox to his master. (Baron's *Life of Jenner*, Vol. I., p. 124.) Another slight error of date upon the subject of vaccination is the statement (p. 759) that "vaccination was introduced into this country in the year 1799 by Waterhouse, of Boston." Waterhouse says: "I commenced the experiment [of vaccination] July 8th, 1800, on my own children. (See Part II., "*A Prospect of Exterminating the Small-Pox*," Cambridge, 1802.)

We are satisfied that this work will at once take the highest position in American medicine, and that it will take a deep hold upon the student the more he familiarizes himself with its contents.

Ne Med J (05) 14: 237, #4, Oct, 1884.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE UNITED STATES ARMY. Author's and Subjects. Vol. V. **Flacus-Hearth.** Washington: Government Printing Office. 4to. Pp. 1055.

With the completion of this, the fifth volume of this great medical bibliography, we get a better conception of the immense benefit which must result from its completion. Its true value, though, can only be estimated by those who daily consult its pages. The reviewers cannot, in the few pages allotted, convey to the reader the wealth of information, the minuteness and accuracy of record, the beautiful typography which guides the reader from subject to subject without weariness. Let one who thinks that he may have an item entirely new first consult these volumes. Perhaps he may expect to give a title to a medical journal article on diseases of the *gall-bladder*, for instance. He would here find seven columns devoted to this one subject, with parenthetical directions, to see also *Bile*, *Biliary calculi*, *Bile duct*, showing that the subject is not exhausted. Here we have in alphabetical array books, pamphlets and medical journal articles, by masters, by tyros, in all languages, thanks to the printer's art, imperishably recorded.

How all this great work has been achieved—the immense library accumulated, the indexing done with such patient minuteness, order brought out of an almost shapeless mass of volumes row upon row deep on the shelves, on the floor, piled everywhere; how one could have the faith to believe in the ultimate success of a work dependent in such a large measure upon the whims of a Congress, as to work on and on, can only be understood when we consider the unique ability of Dr. John S. Billings. While his masterly ability as a bibliographer is apparent to those who are acquainted with these volumes, very few recognize those other traits of generalship which have enabled him to master the almost dubious political element about Washington, so as to secure the continuous publication of these unexampled volumes, and also to enlist the best of the medical profession in the country to his support. These are no common traits, and although what we say may be but reiterations, it cannot be told too often how greatly Dr. Billings has added to the fame of American medicine.

OSTEOTOMY AND OSTEOCLASIS FOR DEFORMITIES OF THE LOWER EXTREMITIES. By CHAS. T. POORE, M.D., etc., etc. New York: D. Appleton & Co., 1,345 Bond street. 1884. Pp. 187. Price \$2.50.

It is a pleasure to peruse such a handsome volume as this one. It is clearly written, beautifully printed and satisfactorily illustrated. This branch of orthopedic surgery is one in which the general practitioner has not many examples, and such a guide as this is very desirable when he finds himself face to face with the difficulties. The author "has had considerable experience, both in the mechanical and in the operative treatment of deformities considered in this book," as he says in his preface, and he evinces this by the masterly manner in which he deals with it.

In speaking of osteotomies in general: "An argument has been frequently used against osteotomies, that in performing them compound fractures are produced, and as compound fractures are exceedingly dangerous, therefore osteotomies are exceedingly dangerous operations. In only one respect can an osteotomy be classed with a compound fracture, and that is that in both there is a communication between the ends of the bone and the air; but the bone is reached in the former by a clean-cut wound without any disturbance of the soft parts; in the latter the wound is a contused and lacerated one, caused either by the ends of the fractured bone, or by the violence causing the injury. The danger from a compound fracture is not the simple fact that there is a communication with the bone, but that the soft parts are torn and lacerated, and herein arises the danger. Osteotomy should be classed as a simple fracture." In the light of modern surgery, of course, this is sound teaching.

He makes this concluding remark: "Taking into consideration the many accidents, the want of experience as to the class of cases suitable for an osteotomy, the faulty methods in operations and wound management, the results have been excellent. If the earlier operations were left out, the mortality would be reduced to almost zero.

Dr. Poore is not as strict a Listerian as some other surgeons engaged in this branch of surgery.

The book gives a short account of the relation of rickets to certain deformities, upon which subject he seems to be largely indebted to English writers, and very naturally so, too, for of all countries Great Britain furnishes the largest number of examples of this disease.

Osteotomy in general is next considered, and then the special opera-

tions on the hip-joint and legs. The concluding chapters are on osteoclasia and the statistics of osteotomy and osteoclasia. Nine pages are devoted to the bibliography of the subject.

In conclusion, we can heartily commend this volume for a place in the library of those of our readers who have much surgical work to do. While the whole volume might be included as one article in one of our larger medical journals, it deserves to be brought out in this form, and will prove a credit to American Surgery.

MATERIA MEDICA AND THERAPEUTICS: AN INTRODUCTION TO THE RATIONAL TREATMENT OF DISEASE. By J. MITCHELL BRUCE, M.A., Aberd., M. D. Loud. Philadelphia: Henry C. Lea's Son & Co. 1884. Price \$1.50.

This is a manual intended for medical students, i. e., undergraduates. It is in a handy volume of 547 pages, 12mo., red-stained edges, and otherwise enticing.

After Dr. Milner Fothergill's high laudation of this little volume, in one of his interesting letters to the *Philadelphia Medical Times*, we examined its pages with increased interest, to see what a therapist of marked ability could find so superior in the writing of a junior. We say unhesitatingly that we find it quite as much of a book as it was described, and can recommend it to all students—undergraduate or post-graduate—who want to get well crystalized lessons in therapeutics. The description of the action and uses of digitalis is admirably well done, and could be committed to memory with decided profit.

The description of drugs is too short to be of much service as a pharmacognostic guide; but as the student now-a-days seldom sees a digitatis leaf, and is never put to the test of pronouncing upon the quality of a given drug, even this much is superfluous.

The rapid and clear descriptions of the chemical constituents of drugs is very satisfactory, and we notice many new and interesting items in scanning them.

We would advise the mastery of this volume, commencing with the last chapters, on General Therapeutics, as a good preparation for special therapeutics. It is so full of the spirit of modern research, so free from idle theories, so full of the practical suggestions upon which alone rational medicine must have its foundation,

that one is impressed with the necessity of absorbing every word of the concisely written text.

HAND-BOOK OF THE DIAGNOSIS AND TREATMENT OF SKIN DISEASES.

By ARTHUR VAN HARLINGEN, M.D., etc., etc. With two colored plates. Philadelphia: P. Blakiston, Son & Co., 1,012 Walnut street. 1884.

This is a small work of 282 pages, arranged in alphabetical order for convenience of reference, designed as it is for the practitioner. For the student of dermatology this volume was not intended, therefore pathological anatomy is not treated of, and etiology but lightly touched upon.

As a help to diagnosis, there are two colored plates, giving examples of primary lesions of the skin, viz: Macules, papules, vesicles, blebs, pustules, tubercles, tumors.

The diagnostic descriptions are plainly written, and the plans of treatment simple and to the point. In no department of medicine is the possession of formulæ good for this that and the other thing, so excusable as in practice in diseases of the skin. Diagnosis cannot be thoroughly learned from the best of books, or the most truthful portraits; but even a tolerably sure diagnosis brings many a doctor to the state of mind that John Hunter was in when he declared that there were two forms of skin diseases—one that sulphur would cure, and the other that the devil himself couldn't cure. This little book, while it assists very materially in diagnosis, serves a better purpose in the numerous good directions for treatment, the possession of which at the right time will be of priceless value.

PRACTICAL MANUAL OF DISEASES OF WOMEN AND UTERINE THERAPEUTICS. For Students and Practitioners. By H. MACNAUGHTON JONES, M.D., M.C.H., etc. New York: D. Appleton & Co. Bond street, Cloth. Pp. 410. Price \$3.00.

The author has well named his work a manual—the size is convenient, it is not too voluminous, it is copiously illustrated. There are 188 cuts, nearly one for every two pages. This, of course, is of advantage for ready reference. Fifty pages are devoted to the “examination of a case,” giving the clearest and most minute details of this important branch of the subject.

Text-books from the pen of Irish teachers are not by any means

as we would desire, judging by this successful volume and by those from the writers of by-gone days. Dr. Jones has given due credit to the large number of American writers who excel in this department of medicine, and a right lengthy array it is.

The section on "Physical Signs, Positive and Negative, of Ovarian Tumors," is especially serviceable, nevertheless he adds his warning: "I shall only here remark that the surgeon who is not familiar with the accidents and complications to be met with in the removal of large abdominal tumors, and whose manifold manipulative skill is not seconded by the experience gained, both in seeing ovariectomy performed and assisting at the operation, assumes a grave responsibility in operating from any written description, no matter how complete."

The most skilled gynecologist will be able to find in this volume many admirable hints, and to the young physician who can afford only one book on this subject, he could not do better than to possess this one.

A COMPEND OF ORGANIC AND MEDICAL CHEMISTRY: Including Urinary Analysis and the Examination of Water and Food. By HENRY LEFFMAN, M.D., D.D.S. Philadelphia: P. Blakiston, Son & Co., 1,012 Walnut street. 1884.

This is a very condensed compend of organic chemistry, but if mastered by the graduate it would put them all far above the standing which most of them ever attain at an examination. The truth is that a student should be required to know as much, at least, as is here given of organic chemistry, before he is admitted to attendance on lectures. If he knew less the teaching he could get in a usual medical course would be hardly comprehensible to him. There is no little skill displayed in the condensation and arrangement of the subject by the author, and his efforts will be appreciated by all who are able to judge.

THE MEDICAL GRADUATE AND HIS NEEDS. By GEO. C. WELLNER, M.D. Detroit, Michigan: George S. Davis. 1884. Pp. 100.

This little book is full of sage advice for the young doctor to help him in those trying days—sometimes years, sad to say—between the time he comes out with the swarm from college and settles down to make his bread and butter, and when he secures a

foothold. It would be well if the young doctor was in a condition to take advice then, but unfortunately he is in the attitude of one who has advice for sale, and is not in such a facile frame of mind as one would suppose. The closing chapter on post-graduate study in Europe, has some excellent hints as to how one might make the best use of a year there, whether a master of French and German or not.

A MANUAL OF DISEASES OF THE THROAT AND NOSE: Including the Pharynx, Larynx, Trachea, Œsophagus, Nose and Naso-Pharynx. By MORELL MACKENZIE, M.D. Vol. II. DISEASES OF THE ŒSOPHAGUS, NOSE AND NASO-PHARYNX. New York: Wm. Wood & Co., 56 & 58 La Fayette Place.

Since we had occasion to notice this volume in the August JOURNAL we have had increased opportunity to become familiar with its contents. It is well worthy of all the praise bestowed upon it by this JOURNAL and by other reviewers. It is a storehouse of items of practical importance "salted" through a clearly written text, making it as a book of reference highly practical. It is interesting to notice the *obiter dicta* of the author on Americans and Americanisms—sweet morsels, which it is the peculiarity of some Americans to like above all other things, whether the opinions be good or bad.

DIPHTHERIA SPREAD BY ADULTS.

Dr. A. Jacobi, in an article published in the *New York Medical Journal*, September 27th, expresses his opinion that the cause of most cases of diphtheria is to be found not in defective sewerage and damp walls, but in contagion from some individual sick with the disease, and expresses the opinion that many of the sore throats which do not confine their owners within doors or interfere with their business are, in point of fact, diphtheria, and capable of reproducing themselves in other individuals. While a tonsillar diphtheria is attended with scarcely any danger, the same disease in the larynx destroys a child by suffocation, and in the nasal passages is

fatal by sepsis. No matter how slight a case is at first, it may extend to nose or larynx, and in another person it may generate the most malignant form of the disease. It does not find lodgment in every person exposed to it any more than measles or scarlatina. While a cannon-ball, however, may miss, a pistol bullet may carry destruction.

"Such a bullet," says Dr. Jacobi, "is many a case of the so-called follicular amygdalitis (tonsillitis). There is such an affection as deserves the name. It implies a catarrhal or suppurative condition of a tonsillar crypt or several of them. It may be obstinate and extend over years, giving rise to constant returns of the secretion or to concretions. In the acute stage, even in the chronic, it will permit of the introduction of a probe into the duct to a depth of from one to two centimetres. The *color* of the secretion is often that of a membrane, not its nature, nor consistence, nor location (still it may become diphtheretic even inside the duct), and in that condition it is not diphtheria. But the large majority of cases which are commonly called follicular tonsillitis do not belong to this annoying but innocent class ; *most of them are diphtheria*. Not everything not fatal need be called by a different name. What to-day looks like a point or four or five points covering the outlets of ducts, may to-morrow be a confluent membrane. Just as well you might withhold the name of variola from a case of small-pox so long as it was not confluent or did not destroy life. You have a family sick with affections of the throat and nose ; a child is dying of laryngeal croup ; another of nasal diphtheria, glandular swelling, and sepsis ; others have severe pharyngeal affections ; others but slight tonsillar tufts, which may or may not coalesce and extend into membrane. Is the first one 'croup?' are the others 'diphtheria?' is the last one 'follicular amygdalitis?' Or the first case in a family was just such a one as was denominated tonsillar folliculitis by the family physician, and no preventive measures were taken to protect the rest of the little flock. From that moment it was that extermination began in that family. We have all seen it ; we ought to heed it all."

Some of the mild cases of diphtheria, according to this writer, are most prolific of danger, because they are apt to assume a chronic course without losing their contagious nature. Instances are referred to where they have continued six or even nine months. While

not depreciating the importance of domestic sanitation, Dr. Jacobi lays strong emphasis on the importance of examining the nares and throats of all attendants. He says that a family with children ought to insist upon the occasional inspection of the throats of their help. Servants with chronic pharyngeal catarrh must not be hired. A seamstress, coming for an occasional day's work, ought to have her throat inspected; cooks and nurses must be looked after, the more carefully the less such people are inclined to give way to their pains or ailments or throw up their places. A sick nurse introduced into a family must be examined; she will go from one place to another and carry pharyngeal and puerperal diphtheria. Thus if there be any class of persons who are the constant transmitters of diphtheria, and require attention and caution, it is nurses and cooks, in fact all domestic help; so do sick-nurses, teachers, hair-dressers and barbers, shop-keepers, restaurant-keepers, and all those people who are in constant contact with all classes and ages. The physician enjoys a certain degree of both active and passive immunity, but it depends on the number and duration of his exposures whether he becomes more or less both endangered and dangerous. *There is as much diphtheria out of bed as in bed; nearly as much out of doors as indoors.* Many a mild case is walking the streets for weeks without caring or thinking that some of his victims have been wept over before he was quite well himself.

The main points in the address are thus condensed:

"There is, probably, no spontaneous origin of diphtheria any more than there is a spontaneous origin of cholera or scarlatina.

"Diphtheria is contagious. Severe forms may beget severe or mild forms. Mild cases may beget mild or severe cases.

"What has been called follicular tonsillitis is *mostly* diphtheria. It is seldom dangerous to the patient, as the tonsils have but very little lymph communication with the rest of the body. But it is contagious.

"This form is frequent in the adult, in whom it loses nothing, however, of its contagiousness.

"Diphtheria in the adult proves dangerous to the community mostly because it does not restrain the patient from communicating the disease.

"It is apt to last long; firstly, because most cases occur on a surface covered with pavement epithelium (tonsils); secondly,

because of the constant exposure and neglect on the part of the patient. Even without it diphtheria may last weeks and more ; with it it is subject to sudden relapses. As long as it lasts it is contagious.

“As diphtheria is but a mild affection in many adults, who disregard it, and frequently do not care to mention its existence, pain in swallowing and moderate malaise being the only symptoms, the question of transmission by means of clothing, etc., on the part of third persons is capable of becoming more difficult to answer than it ever was.” Many a case which has been believed to be thus carried is, probably, one of direct contagion from a patient to a second person, from this second to a third.”—*Boston Medical and Surgical Journal*.

USE OF CHLOROFORM IN LABOR.

We are indebted to the *Journal of the American Medical Association* (October 11, 1884) for the paper on the above subject by Dr. John Herbert Claiborne, of Petersburg, Virginia, with the discussion that ensued. We present some interesting extracts. Dr. Claiborne's observations are founded upon the study of two hundred cases conducted under chloroform :

* * * * * * * *

Several practical questions arise in discussing the propositions that I have submitted—and amongst them :

1. Should chloroform be administered in *every* case of labor ? I reply, no. There are some cases of labor in which the pain is insignificant ; some in which there is no pain. I have patients in my clientele who, in repeated labors have assured me that the process in no stage was painful ; that the sensation amounted to nothing more than an operation from the bowels when somewhat constipated. In others the pain is so slight as to require no alleviation, and the process of delivery so prompt as to call for no interference. Such exceptionally happy cases need no further blessing. But such cases are indeed exceptional. As a rule, the act of parturition may be fitly termed, as it has ever been termed, an *agony*, from the Greek,

a struggle as if in the pangs of death. Such pain appeals to every human heart for help, and every human instinct compels us to render it. Not only so, but the rational requirements of sound practice demand that we arrest at once this fearful suffering, this terrible irritation of the terminal nerves of that tender organ, which in the woman is the throne of the sympathies. *Ubi irritatio—ibi fluxus*; and what fatal changes wait upon those processes so easily and so rapidly converted from the physiological into the pathological! Dr. Dickson, of Charleston, used to say that he always tried to kill pain wherever he found it, as he always tried to kill a snake. Both are the enemies of the human race, hereditary, traditional, implacable and mortal. Kill the pain and cure the patient. And what will kill pain so quickly, so thoroughly and so efficiently as chloroform? Not only so, but in an instant you transport the patient from the throes of martyrdom into the ecstasies of the blest.

But secondly. Another practical question arises. At what time or at what stage of ordinary uncomplicated labor should we commence the exhibition of chloroform? Certainly not until labor has surely and unequivocally set in—not until the lips of the os uteri have thinned out, and the process of dilation unquestionably begun—not for those dragging, nagging pains—aggravating and distressing, but not genuinely the pains of labor, only the precursor of those pains, and partaking of the nature of neuralgia of the sacral plexus and its diversified connections. Chloroform would nullify these pains too—as it does all other pain when pushed to its limits. But we do not propose to administer chloroform for mere neuralgia. For these pains we rely upon bromide of soda or potash, and the hydrate of chloral, twenty grains of each every hour until a drachm of each is taken, if so much be necessary to secure relief; the former agent for its special action upon the spinal centres, and the basic ganglia; the latter for its effect upon the higher centres of cerebral origin, a combination of rare power and one which has rarely disappointed me. Chloroform administered under these circumstances doubtless does retard labor, and postpones all of its processes. But withheld until the process of dilatation has clearly begun—or better, until the circumference of the os has attained to the size of a half dollar, and the use of the anæsthetic will not only facilitate, but will hasten the act of opening to completion. More than that, it will obtund and render endurable those trying pains

that inaugurate and accompany the first stage of labor, and which many women declare to be more harrowing than the agony and throes of the second stage.

And in the first stage it is not always, indeed it is not often necessary to push the anæsthetic to the induction of unconsciousness. Administered even in very small quantities, it assuages these pains to an extent which enables a woman to bear them with patience. In this stage it is best that it should be given intermittently—be given as the pain comes on and be taken away as the pain goes off.

Should the os, however, prove especially stubborn and refuse to dilate, then chloroform to the extent of inducing complete anæsthesia, will often relieve the difficulty by bringing on relaxation of the circular fibres. It will generally do so, and thus may often obviate the necessity of antimony or venesection, even in the plethoric and full-blooded. It will very rarely fail to do so, if preceded by a full dose of chloral and bromide of potash.

But now, when the first stage has terminated, when the os is fully dilated, and the head of the fœtus commences its descent through the pelvic passage, a condition of things which the experienced accoucheur can often recognize without vaginal examination, by the subjective symptoms, by a change in the character of the complaint made by the patient, or by a sort of a lull in the storm,—the woman realizes as a rule a temporary relief, and often falls into a short sleep—very short, it may be, but very refreshing. In this state what shall we do with the chloroform? may be asked as a third question.

Take it away, of course. Dispense with the anæsthetic for a shorter or longer time, according to the urgency of the recurring pains. Some women, in whom the expulsive pains of the second stage are merely expulsive efforts, and no pains, and who do not dread this stage of labor at all, call for the chloroform no more. In such cases no anæsthetic is necessary, and if not necessary, its administration, of course, is not judicious. But unfortunately for humanity, these painless cases of labor are not often seen in the obstetric chamber. Generally, when the hard head commences its downward career through the pelvic arc, pushing along, crushing along against the irritated nerve plexus lining that sensitive channel, and caught by a resistant perinæum is hurled back time after time,

then the true agony is begotten, which calls for human sympathy, and demands human help. What heart so hard as to withhold chloroform in that hour of bitterness and despair! And in that last fearful pain, invoked by a long-suffering perinæum, just as its last attenuated fibres are stubbornly yielding to the force of those final throes, which threaten in their violence the very dissolution of nature, who can stand idly and unmoved, and yet know that he holds the remedy for it all in his own hand? Not I. Nor am I satisfied how to assuage the suffering. I abolish it. Chloroform, then, as the bleeders say, *ad deliquum animi*. I give it to full unconsciousness. Nor have I ever seen it arrest or delay the labor in this event. I have often thought it gave full play to, if it did not help the expulsive efforts at the last. At the same time it relaxes the perineal tissues and diminishes the danger of rupture. I have never, except on one occasion, seen a torn perinæum under the full influence of chloroform, and that occurred from the careless handling of a pair of long forceps.

I can only account for this fact of muscular relaxation and tissue relaxation under the use of chloroform, and yet persistent and increased uterine action, on the ground that the diminished sensitiveness of animal function more readily permits, if it does not increase organic or ganglionic action.

I have had a patient say to me more than once, "Doctor, give me enough chloroform to *prevent my feeling the pain*, and I can bear down better. I can't help bearing down." What does that mean, and what does that teach?

The most striking illustration and the most positive proof which I ever had of this fact, I derived from the case of a lady whom I once attended in a condition of intoxication. She had at two previous labors most painful and tedious delivery—under use of instruments—and some wise person had told her that if she "would drink half a pint of the best whiskey, just as her labor begun, that she would not get drunk, and yet that she would not feel her pains!" I was called to her some fifteen minutes after she had taken the whiskey, and was told by the nurse what had occurred. She was even then too much under the influence of the potion to recognize me or to speak to me, and soon after passed into that semi-comatose state known as dead drunk. An examination revealed the os dilating. I remained by her side for six hours, and during that period every

stage and process of labor was consecutively and regularly developed and completed, and the child born alive and well! Yet, with the exception of uterine dilatation and contraction, and general muscular contraction attendant on the expulsive effort, there was no more manifestation of life in the woman than could be seen in the delivery of a manikin!

Not one sound or cry was made, nor was there the slightest facial expression of pain, or of any other emotion, during those six long hours, nor for six hours afterwards; nor when, after some difficulty, she was finally restored to consciousness, did she remember or could recall one single incident of her accouchement, except that "on a friend's advice she had drunk the liquor after preparing her bed." I had attended this lady before, and I have attended her in several consecutive confinements, but I have never known her to have so safe and so unexceptionally a normal labor as on that occasion.

I do not, of course, intend by these remarks to endorse the use of the anæsthetic which she adopted, or to commend the use of any anæsthetic to the extent to which she carried it, but draw the logical and inevitable conclusion that *anæsthesia, even to the utter abolition of all signs of sensibility, may be safely induced, and that it does not necessarily arrest or retard the obstetric process. More than this—it does not prevent, but does, in my experience, incite firm uterine contraction, sometimes to an unpleasant extent in the third stage of labor, thereby diminishing the risk of post-partum hæmorrhage, by expelling uterine clots and facilitating uterine involution.* I mean by this statement to say that, in many cases in which I have used chloroform most freely, in the first and second stages of labor, the third stage was marked by unusual and persistent uterine action—the patient exclaiming in several instances, "Doctor, I cannot stop bearing down; I feel as if I should be compelled to force the womb through the pelvic 'passages.'"

And now arises another practical question: Should the use of chloroform be continued in the third stage of labor? As a rule, I answer no, but in exceptional cases, yes. In puerperal convulsions, for instance, it is the sheet-anchor of the accoucheur, and I know of no remedy which can replace it. Venesection in the plethoric and chloral hydrate in all cases, are most valuable adjuvants in such complications; but, if confined to one sole remedy, I should select chloroform. Theoretically and practically it meets every indication.

In cases of retained placenta with rigid closure of the os, and in cases of hour-glass contraction I can conceive of circumstances which might justify or demand its exhibition. I have no experience of its use in either case. Finally, that in all cases of complicated labor, demanding manual or instrumental interference—turning, or the use of forceps, or perforation, anæsthesia is imperatively demanded, admits of no question. All are agreed, I presume, upon that subject.

It only remains to enquire what form of anæsthetic shall we adopt? In every instance in which I have used the word I have wished it to be understood that I meant *chloroform* pure and unmixed, such as that prepared and furnished the profession by Dr. Squibb, of Brooklyn. I think it vastly better than sulphuric ether in obstetric practice for the following reasons: 1. It requires a much smaller quantity of the agent to induce the same amount of anæsthesia. 2. It produces the same degree of anæsthesia in a much shorter time. 3. It acts with much more certainty. 4. It is **not** followed by the nausea and vomiting which are so frequently the results of the use of ether. 5. It does not act so often as a stimulant, inducing the peculiar intoxication or hysterical excitement which is common in the exhibition of ether. I have been surprised, however, to read in a note by the American editor of Playfair's *Midwifery* (last edition, p. 291), that "in the United States chloroform is rarely used in obstetric practice, as compared with pure sulphuric ether, and anæsthesia is much less practiced than it was soon after its introduction." This certainly does not accord with my observation or experience. I cannot undertake to speak as he does for the whole "United States." But I am sure that when he speaks for the geographical section of that country which I have the honor to represent, he speaks without the book. In general surgical practice we use less unmixed chloroform, preferring in many instances either the washed ether, or a mixture of that with chloroform an alcohol—something like the Vienna mixture; but we have not discarded the use of chloroform even in general practice by a large majority. In obstetric practice I do not know of one physician who substitutes chloroform by ether. I have occasionally used it, for the reason that it was not convenient to procure the chloroform and the ether was at hand; but I can see no special advantage in the use of ether, but the marked disadvantages which

I have enumerated. Besides, if, as the editor referred to contends, inertia of the womb occasionally follows the use of chloroform, it must also follow the exhibition of ether likewise (*loc. cit.*, p. 292), and we are not the more apt, therefore, to have post-partum hæmorrhage after the one than after the other. In addition, though under the use of chloroform in general surgical practice many a death has occurred, or rather been published; who has witnessed or recorded a death from the use of chloroform in obstetrical practice?

Now, whilst I am unwilling to array myself anywhere in this discussion, anywhere except on the side of safety and conservatism, yet, before the annunciation of the American editor of Playfair's Midwifery be accepted as authority, I would urge that the profession at large earnestly and generally enquire into the truth of the propositions which I have had the honor to submit for the consideration of this learned body.

And if woman is to be robbed of this inestimable boon in her hour of agony, and the lying-in chamber is to be reconverted into the hall of torture, let me meet her there with the painful and sorrowful assurance that wiser men than I have decreed that she must submit to the irremediable and the inevitable.



ON THE ACTION OF A SECRETION OBTAINED FROM THE MEDICINAL LEECH.



Professor John B. Haycraft has given in the Proceedings of the Royal Society some very interesting results of his investigations into this subject. It has long been a difficult problem to solve in the study of the coagulation of the blood as to why the blood stripped from the leech after his application to man in "leeching," should remain fluid, and why there should be a tendency to the oozing of liquid blood from leech bites. Dr. Haycraft acted upon the idea that probably the leech secretes some ferment containing juice which antagonizes the blood ferment, thereby preventing coagulation within its body, and enough remaining around the edges

of the wound to prevent the outflowing blood from clotting until the leech ferment is all washed away.

To decide this question, the gullets and buccal cavities of leeches were taken, cut in small pieces and placed in a salt solution, resulting in an extract of leech of a faint greenish-yellow tint and an alkaline reaction. This was found, when applied to freshly drawn blood, to prevent coagulation. The extract was then boiled, but its characteristics remained unchanged, showing that it was not a ferment? Its active principle is insoluble in chloroform, ether, benzole and alcohol, and could not be separated in a pure form.

The blood-coagulating ferment was then separated carefully from blood, and one part (*a*) treated with distilled water, the other part (*b*) with leech extract. On being added to hydrocele fluid *a* produced a satisfactory clot, *b* not producing coagulation. Hence the action of the leech extract is to destroy the blood-coagulating ferment.

Fresh blood mixed with leech extract and placed under the microscope showed that while coagulation was prevented, the corpuscles were not influenced, the red forming rouleaux as usual, and the white exhibited the normal amœboid movements. Careful microscopical examination of the parts of the leech involved failed to show any glandular structure. The secretion is probably derived from the epithelial cells lining the sucker and buccal cavity; it may be that unicellular glands of the sucker share in its production.

The injection of this leech extract into the veins acts similarly to the injection of peptones in the non-coagulability of the blood, acting on dogs and rabbits alike. In the coagulation of milk it has no influence, but it hastens the coagulation of myosin, and probably when it causes loss of contractility in a muscle, it is due to this fact inducing rigor mortis, the essential phenomenon of which is clotting of the myosin.—*Journal of the American Medical Association*.

PROF. MALLET has been elected Professor of Chemistry in the Jefferson Medical College, to succeed the late Prof. Rogers. We congratulate the Jefferson College, but we are sorry to know that the University of Virginia is to meet with such a loss.

CHOLECYSTOTOMY; WITH A REPORT OF TWO NEW CASES, A TABLE OF ALL THE HITHERTO REPORTED CASES, AND REMARKS.

In *The American Journal of the Medical Sciences* for October, 1884, Drs. J. H. Musser and W. W. Keen publish a carefully prepared and instructive article on cholecystotomy, in which they relate two new cases, with a table of all the hitherto reported cases, thirty-five in number.

The first case was that of a man, æt. 32, who had had attacks of biliary colic for five years, followed by jaundice, until he was reduced in strength, and had chills and fever threatening life. Dr. Keen attempted cholecystotomy, the incision being made over a region of dulness believed to be the gall-bladder. This dulness was found to be due to an inflammatory mass, which glued together the gall-bladder, colon and intestine. No stone could be detected. The wound was closed, and recovery ultimately followed a course of Hathorn water at Saratoga.

The second case was also that of a man, æt. 31, gastro-intestinal catarrh, followed by jaundice, enlarged gall-bladder, and symptoms of internal suppuration. The enlargement of the gall-bladder was demonstrated by the hypodermic needle, but the fluid was not bile. Dr. Keen performed cholecystotomy, using a hollow-handled spatula to drain off the twenty ounces of fluid contained in the gall-bladder. The gall-bladder was found to be seven inches in depth, but neither by finger nor probe could any gall-stone or the orifice of the duct be found. A biliary fistula was established, and bile was discharged through it the next day. The patient died a week later of exhaustion. The *post-mortem* examination revealed inflammatory closure of the cystic and common ducts at the mouth of the gall-bladder and at the duodenum.

Dr. Musser in his medical comments analyzes at length the causes, the symptoms and diagnosis of biliary obstruction, under the heads of jaundice, tumor, pain and suppuration, especially in relation to gall-stones and other foreign bodies and diseases of the ducts. He points out the means by which a just conclusion may be reached, and that cholecystotomy should be resorted to early in the case rather than wait till the blood is disorganized and the liver softened and made function-

ally useless. Especially is this true in view of the low mortality of the operation, there having been (excluding Gross's incidental case) only nine deaths in thirty-four operations, and of the fact that Mr. Tait has done thirteen operations, by far a larger number than any other operator, all of which have been successful.

In his surgical comments, Dr. Keen discusses the surgical means of diagnosis by aspiration, with or without probing through the canula, and by acupuncture, both of which, when properly done he commends. He also strongly urges an early laparotomy, followed at once by cholecystotomy, if found advisable, and condemns the attempt to provoke or to wait for adhesions. Indeed, upon this disregard of adhesions hinges the whole of our modern progress in abdominal surgery. He points out that to Bobbs, of Indiana, and to Sims, both American surgeons, is due the credit of first performing and practically perfecting the operation. He advises the formation of a biliary fistula, rather than sewing up the gall-bladder, and disapproves, as a rule, of removal of the gall-bladder, as adding a new and usually a needless danger.



MUMPS AS A CAUSE OF SUDDEN DEAFNESS.

Disease of the ear during the progress of acute infectious disorders is a not infrequent occurrence. Especially are suppurative inflammations of the middle ears common during the progress of scarlet fever, and non-suppurative inflammations are a frequent attendant upon the progress of measles. The nature and treatment of these ear diseases are well understood. But occasionally during the progress of mumps a sudden and complete loss of hearing occurs, which is not so well known, either as to its nature or its treatment, and a paper on the subject from the pen of Dr. Leartus Connor, of Detroit, which appears in the October number of *The American Journal of the Medical Sciences*, is both timely and instructive.

As the result of his personal experience and of the study of thirty-three recorded cases, Dr. Conner concludes that—

1. Mumps does in some rare cases produce complete deafness.
2. This deafness is usually attended with all the evidences of disease of the labyrinth.

3. These show that it sometimes begins in the cochlea, but more frequently in the semicircular canals.

4. Owing to the lack of early observations and treatment it is impossible to say that it is not transmitted through the middle ear from the parotids to the labyrinth.

5. The history of some of the cases would seem to suggest that such an origin was possible.

6. This possibility renders it very important that every case of deafness during an attack of mumps be at once carefully examined, so as to settle the question.

7. This possibility offers the only hope for the successful treatment of these cases so as to prevent deafness. Thus, if there be a middle ear disease, we might hope that revulsive and counter-irritant treatment would arrest the disease and save the labyrinth.

8. As to treatment of the labyrinthine disease, nothing has thus far been devised that has produced any satisfactory result.

COLOTOMY, WITH A COLLECTION OF THREE HUNDRED AND FIFTY-ONE CASES.

A retrospect of the operation of colotomy is of marked interest ; proposed and rejected, it was apparently forgotten, then revived and modified successively by several surgeons in its day ; and, although over a century and a half has been consumed in its progress, it is even yet far from being in its true position amid the heroic measures of modern surgery. Such a retrospect appears in the October number of *The American Journal of the Medical Sciences* from the pen of Dr. Wilmer Ridgway Batt, of Phoenixville, Pennsylvania. A surgeon who subscribes to the doctrine that an artificial anus should not be made in the case of imperforate anus is not justified in doing so on any principle of morality, since upon him rests an imperative obligation to employ to the utmost of his ability the means placed at his command for the relief of human suffering and the prolongation of human life. When we likewise consider of what vast importance is the prolongation of life in a human adult, and how vast may be the concerns which hang upon such an event, we find the same imperative duty no less binding. To obviate death from over-distension of the bowels, which is one of the most painful and

distressing terminations of life, colotomy will be justifiable under conditions of the greatest gravity; and may be indicated in any obstructive complication of the lower bowel which has passed beyond the power of local remedies, and in which a judicious trial of medical improvement has failed to afford relief. Mr. Phillips, of London, tells us that one case of intestinal obstruction occurs in every one hundred deaths, and from 139 cases of obstruction which he collected, in which surgical aid was not given, 133 proved fatal. The fact that such a terrible fatality as this should exist, and an operation affording the advantages of colotomy be unperformed, must ever be a shadow upon the honor of modern surgery. The technique of the operation is fully discussed, and elaborate statistics are presented which show most conclusively that the dangers of the operation are very few, and that the number of recoveries depends very greatly upon the nature of the affection for which it is performed.

PREVENTION OF OPHTHALMIA NEONATORUM.

One of the greatest blessings which medical art of late has conferred on mankind is the preventive treatment of the blennorrhœa of the eyes of new-born children. In the October number of *The American Journal of the Medical Sciences* Dr. Henry J. Garrigues calls attention to the value of Credé's method of treatment, which in brief consists in washing the outer surface of the eyelids with plain water, separating them slightly and letting a single drop of a two per cent. solution of nitrate of silver fall from a glass-rod on the cornea. No after-treatment is used.

In 1882 Garrigues introduced Credé's treatment into his service at the New York Maternity Hospital, since which time 351 children have been thus treated and not a single one was affected. He makes this application immediately after the cord has been severed, which is not done before the pulsation in it has ceased. During the subsequent ablution great care is taken that no foreign substance enters the eyes.

The results obtained in lying-in hospitals by this method are so striking that there cannot be any doubt about the advisability, nay, the duty of adopting it in all such institutions.

CORRESPONDENCE.

FLORENCE, S., C. September 24, 1884.

To the Editor of the North Carolina Medical Journal:

The subject of the "case of ovariectomy" published in Volume 10 No. 1 of your JOURNAL has just died without any symptoms pointing to her original disease or the operation for its cure. She had been able to do her ordinary duties with more than her usual ease; indeed, she had lately led a laborious life without inconvenience, had improved in strength and appearance, was cheerful, but never menstruated after the operation. The estimated length of life if left alone to palliative treatment was seven and ten months. So in this case about two years was added to her life by the operation, and those the most comfortable for many years. The disease of which she died was said to be gastritis.

Respectfully,

E. MILLER, M.D.

WE are glad to be able to relieve the anxiety of the numerous friends of Dr. Chaillé, by informing them that the Secretary of the Medical Chirurgical Faculty of Maryland was in error in placing him among the deceased in the list of honorary members.

THE USE OF ATROPIA IN THE COMMENCEMENT OF CONVERGENT SQUINT.—Dr. Boucheron, of Paris, read a paper on this subject at the Copenhagen Medical Congress. At the very commencement of convergent strabismus the prolonged use of atropia for both eyes appeared to be the essential treatment, because it opposed the essential factor of the squint—the instinctive and excessive efforts at accommodation. Atropia was only efficacious where the squint was intermittent. This drug alone had been sufficient to cure and important number of cases.

NOTES.

MR. VANDERBILT'S GIFT OF HALF MILLION OF DOLLARS TO THE COLLEGE OF PHYSICIANS.—The New York *Herald* gives us the very gratifying piece of news that Mr. William H. Vanderbilt has given the New York College of Physicians and Surgeons half a million dollars. Heretofore there has been no endowed medical college in New York city. Now, with such a princely sum at its command, we expect to see this college exceed its already high standard. The profession of the whole country will greatly rejoice at this appreciation of the importance of higher and better medical teaching.

ANALYSIS BY CAPILLARITY.—The September and October numbers of the *American Journal of Pharmacy* have articles on what is called analysis by capillarity. Prof. J. U. Lloyd showed that by dipping a strip of blotting-paper in a solution of ter-sulphate of iron, that the iron salt and the solvent would rise by capillary attraction, but that there was a distinct line of demarcation between them, above which no color reaction from iron could be obtained by the usual tests. In other words, the salt and its solvent were completely separated. The conclusions were that: 1. Liquids can be separated from solids held in solution. 2. Liquids can be separated from each other. 3. Certain chemical combinations, even, can be broken without calling upon such recognized dissociating powers as high or low temperature, or the action of reagents. It seems that the idea is not entirely new, having been noticed and employed to a limited extent by Frankenheim and (Watt's Diet'y, pa. 741) *Musculus* (*ib.* 1st Supplement, p. 293), the latter having used it to detect acetic acid and alcohol in aqueous solution. The editor of the *Journal of Pharmacy* gives an abstract translation from Schœnbein's paper on this subject, showing the height to which substances dissolved rose in the strips of blotting-paper. A table of twenty different substances experimented with is given. Analysis by capillarity is yet in its infancy, but there is a good prospect that it will prove to be a ready and easy method for the separation of fluids and solids, one which perhaps may yet be made available for clinical diagnosis, in the quantitative estimation of the secretions of the body.

DR. FLEETWOOD CHURCHILL, of Dublin, died quite suddenly at his residence in St. Stephen's Green, on the 6th September, of disease of the heart. He was son of the late Dr. Churchill, whose works on Obstetrics and the Diseases of Children are so well known, and highly valued by the profession.

DUPUYTREN'S FINGER CONTRACTION.—The success of Mr. Wm. Adams, of London, in restoring finger contraction has been very marked, and has been successfully imitated by Dr. Roberts, of Philadelphia, and by a recent writer in the *Boston Medical and Surgical Journal*. The operation is subcutaneous, and performed with the smallest cutting blade used by the ophthalmic surgeon. The results are very gratifying.

THE RELATIVE VALUE OF THE BROMIDES.—Dr. Squibb in the *Ephemeris* for September gives some sound advice on the comparative value of bromides. He points out that the amount of bromine present, even in the most moderate dose of the bromides, if set free in the stomach, would be deadly. As ammonium bromide is easiest to decompose, and is, therefore, more liable to be irritant and unsafe, he gives preference to bromide of potassium. [This writer has found the bromide of sodium less unpleasantly saline, and he claims that he was probably one of the first persons in this country to use it, viz: in 1857.]

THE GREEN COLOR OF CANNABIS INDICA EXTRACT NOT DUE TO THE PRESENCE OF COPPER.—Dr. Squibb in *Ephemeris* for September corrects an error committed by Mr. Henry MacLagan in the *American Druggist* of July, 1884. Mr. MacLagan attributed the green color of Cannabis extract to copper introduced by manufacturers either purposely or through ignorance, and that this extract cannot be of a green color without being contaminated with copper. Careful experiments made by Dr. Squibb show that good hemp extract ought to be green in color, and that an extract made purposely in a copper vessel to determine how much of that metal would enter into its composition, showed that a medium dose of the extract made in this way would contain .00074 grains of copper.

DR. LOUIS ALEXANDER DUGAS.—The telegrams announce to-day (October 21) the death of Dr. Dugas, of Augusta, Georgia. He was born in Washington, Georgia, 1806. He graduated at the University of Maryland in 1827, and commenced practice in Augusta in 1831. Dr. Dugas was a contributor to the medical journals and held many positions of trust.

FEES NOW-A-DAYS NOT SUFFICIENT.—Dr. Charles J. B. Williams says in his "Memoirs": "In common with other consulting physicians, I think that the fee of one guinea (\$5) is not a sufficient remuneration for the amount of time and skill bestowed on a new case; and that the first ought at least to be two guineas, as has been customary in consultations with other physicians. In olden times a physician, with watch in hand, would feel the pulse of a patient, look at the tongue, ask a few questions, write a prescription and take his fee; and, thus disposing of patients at the rate of six in the hour, would be well remunerated by one guinea from each. But now, a physician must first inquire carefully into the history of the case; then, in addition to the old appeal to pulse, tongue, etc., he must physically explore, and if necessary measure, the chest and abdomen; often he has to chemically test and microscopically examine the secretions, and call to his aid the thermometer, and perchance the laryngoscope and the sphygmograph; and then, in addition to a fully explained prescription, he may have to supply a long dietary table, and perhaps have to write a letter to the doctor in the bargain! Such consultations can hardly be completed within the hour; and are poorly paid by a fee of even two guineas. * * * Compared with those of barristers of the highest eminence, the *honoraria* of consulting physicians are very low, and do not represent the learning and dignity of the profession or the value of the work." * * * After twenty years of practice (in 1848) Dr. Williams' income was £3,600.

THE PHARMACOPŒIA AND PHYSICIAN'S PRESCRIPTIONS.—Squibb's *Ephemeris* we find some suggestive observations on the number of articles in the Pharmacopœia used. The remarks are founded upon some investigations made by Prof. William P. Bolles, late of Harvard Medical School. From the files of three prominent pharmacists in Boston he counted 3,726 prescriptions from various physicians of that city. The number of articles occurring in these

prescriptions were 504, the whole number in the present Pharmacopœia being 994.

Of the 504, 236 occurred 5 or more times.

157	"	10	"	"
80	"	25	"	"
27	"	50	"	"
9	"	100	"	"
1	"	200	"	"

Sulphate of quinine leads the list and is found in 292 of the 3,726 prescriptions; sulphate of morphine in 172; bromide of potassium in 171; iodide of potassium in 155; tincture of chloride of iron, 134; subnitrate of bismuth, 133; glycerin and syrup taken, 120; syrup, 108; carbolic acid, 92; extract nux vomica, 87; paregoric, 80; bicarbonate of soda, 77; calomel, 72; chlorate of potassium, 71; compound tincture of gentian, 67; lime water, 65; and so on down. It will be thus seen that of the 994 articles of the Pharmacopœia only 18 occur more than 65 times in 3,726 prescriptions, and of these 17 three are vehicles or adjuncts which are in such common use as to bring their numbers into prominence. Dr. Squibb regards it as surplusage of a very useless kind to have a drug in substance, in *abstract, decoction, infusion, extract, fluid extract and tincture*. He says the individual habits of physicians are the cause of much of this surplusage. One of the remedies for this evil he points out as follows: "The individual preferences of physicians are largely prejudices adopted from teachers in the schools, and therefore if the schools would but reason upon the subject and direct only the best preparation of each drug, a needed reform in the Pharmacopœia would soon follow, and the pharmacist's supplies would be much fresher and more trustworthy."

"DR. S. S. WILTBANK," says the *Peoria Medical Monthly*, "a genial gentleman, well posted in his business, left us several samples of William R. Warner & Co.'s goods. We like the 'Parvules,' and think the idea which led to their manufacture a good one. By this means we can administer staple drugs in a pleasant manner, and by small doses, frequently given, probably obtain the same effects as from larger doses given at greater intervals. They will be found especially advantageous in treating diseases of children."

OBITUARY.

DR. W. D. PENDER.

Dr. W. D. Pender died in Tarborough September 24, of typhoid fever. The writer of this remembers with gratification the excellent examination which Dr. Pender sustained before the Board of Examiners in Raleigh last May. His youthful appearance excited considerable comment, but his mind was well trained, and his deportment that of a young man of good prospects as a practitioner. So young was he that the Board of Examiners had to withhold his license for several months, merely to comply with the law requiring the candidate to be twenty-one years of age. We learn by the *Maryland Medical Journal* that Dr. Pender was only nineteen when he graduated (1883) at the University of Maryland, and that he graduated with high distinction, being the recipient of the Miltenberger prize.

CORT. F. ASKREW, of Corydon, Indiana, states:—"I am using *Mellier's Standard Buggy Case*, and consider it the neatest, most desirable and most convenient that I have ever seen."

PROF. C. H. HUGHES, Lecturer of Psychiatry and Neurology, Post-Graduate Faculty, St. Louis Medical College, Editor *Alienist and Neurologist*, etc., says in the December No., 1882, of that journal: "BROMIDIA is a reliable compound of well-known and favorite medicines in the management of insomnia, and as such we commend it to those of our subscribers, hospital physicians and others, when occasion requires the employment of this combination of the potassic bromide, cannabis indica and chloral hydrate. We have always found the compound *uniform* in composition, the mixture well made and the therapeutic effect what ought to be expected from its ingredients."

BOOKS AND PAMPHLETS RECEIVED.

Plastic Surgery of the Face. By L. McLane Tiffany, M.D. Reprint from Virginia Transactions. 1883.

Report of Committee on State Medicine. Reprint from Indiana Transactions. By Thad. M. Stevens, M.D. Pamphlet. Pp. 18.

Proceedings of the Connecticut Medical Society, 1884. Ninety-Third Annual Convention held at New Haven, May 28th and 29th.

Questions Submitted to the Graduating Class of the Medical College of Ohio, 1871-'72. Pp. 50. Cincinnati: W. H. Scott. Price 50 cents.

The Influence of Lung Retractivity in Pleurisy and Pneumonia. Thorax. By F. Donaldson, M.D. Reprint from Transactions Med. Ch. Faculty, Md. 1884. Pp. 15.

A Practical Treatise on Disease in Children. By Enstace Smith, M.D., F.R.C.P., etc., etc. New York: William Wood & Co., 56 & 58 La Fayette Place. Pp. 844. 1884.

On the Development of Physiological Chemistry and its Significance for Medicine. By Professor Hoppe-Seyler. Translated by T. Wesley Mills, M.A., M.D., Montreal. Reprint. Pp. 20.

A Manual of Obstetrics. By Edward L. Partridge, M.D., Professor Obstetrics New York Post-Graduate Medical School, etc., etc. With 60 Illustrations. New York: William Wood & Co. 1884. 12mo. Cloth. Pp. 295.

Result of Operative Measures for Rectal Cancer. By L. McLane Tiffany, M.A., M.D., Professor Surgery University of Maryland. Pamphlet. Pp. 4. A Contribution to the History of Ligation of the Common Femoral Artery. Same author. Pamphlet. Pp. 12.

Irritation of the Prostate. By R. Harvey Reed, Mansfield, Ohio. Reprint from *Columbus Medical Journal*. By the same: A Periodical Painful Affection, Believed to be located in the Liver, its Capsule or Both, or Possibly an Irritation of the Capsule of Glisson. Chicago. 1884.

The Medical Record Visiting List or Physician's Diary for 1885. Two sizes—\$1.25 and \$1.50.

Surgical Delusions and Follies. By John B. Roberts, M.D. P. Blakiston, Son & Co. 1884.

An Analysis of One Hundred Cases of Labor. A.W. Nicholson, M.D. *Detroit Lancet* reprint. Pp. 4.

The First Pharmacopœia Published in the United States of America. Reprinted from the *American Journal of Pharmacy*. September, 1884. Pp. 32.

Forty-Second Report to Legislature of Massachusetts Relating to the Registry and Return of Births, Marriages and Deaths for the year ending December, 1883. With editorial remarks by Frank Wells, M.D. Boston : 1884. Pp. xcii.

The Lock-Jaw of Infants (*Trismus nascentium*), or Nine Day Fits, Crying Spasms, etc. Its History, Cause, Prevention and Cure. By J. F. Hartington, M.D., Washington, D. C. New York : Bermingham & Co., 28 Union Square. 1884. Pp. 123.

The Elements of Pathology. By Edward Rindfleisch, M.D., etc. Translated from the First German Edition by William H. Mercur, M.D. Revised by James Tyson, M.D. Philadelphia : P. Blakiston, Son & Co., 1012 Walnut street. 1884. Price \$2.00.

A Contribution to the Study of Coryza Vasomotoria Periodica, or so-called Hay Fever. By John N. Mackenzie, M.D. Reprint. Pp. 16. By the same : Irritation of the Sexual Apparatus as an Etiological Factor in the Production of Nasal Disease. Reprint. Pp. 7. By the same : Cases of Reflex Cough Due to Nasal Polypi. With Remarks. Reprint. Pp. 8.

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SELECTED PAPERS.

ON THE TREATMENT OF CHRONIC RHEUMATISM AND GOUT.*

A Clinical Lecture.

By Prof. DUJARDIN BEAUMETZ, of Paris, France.

GENTLEMEN :—I propose in this lecture to consider the treatment of chronic rheumatism and of gout. By these words chronic rheumatism I do not mean all chronic forms of rheumatism, but rather that variety which affects the bones, and which is characterized by those deformities of the small joints which have given to this affection the name of *nodose rheumatism* or *arthritis deformans*.

Confounded from remote antiquity under the name of arthritism, gout and chronic rheumatism have been now grouped in the same description, now constituted as distinct entities, according as writers have taken for their basis the etiology, the symptomatology, or the pathological anatomy of these two affections. To-day this question, after many vicissitudes, seems to have reverted to the

* Translated from advance sheets by E. P. Hurd, M.D., of Newburyport, Massachusetts.

point from which it started, and if we observe between gout and rheumatism differences radical and complete, we recognize also that they may derive their origin from one common hereditary source

To this hereditary cause of these two diseases we give the name of arthritism, and if gout and rheumatism have at their origin many points of contact, they soon separate in two divergent directions, of which the two extremes are chronic arthritis deformans, on the one hand, and acute gout on the other. This opinion, which I defended at the time of the discussion which arose in the Society of Hydrology, between the partisans of arthritism and those who, like Durand Fardel, persist in seeing in gout, chronic rheumatism, and acute rheumatism distinct morbid entities, I mean to-day, for when you carefully trace back the genealogy of arthritic patients, you almost always find either rheumatism in all its forms, or gout in all its modalities. At the same time, take note that quite recently our colleague Lancereaux has withdrawn arthritis deformans and dry arthritis from the category of arthritism to place this affection in the group of herpetic disorders. But this is a new view, which needs to be discussed before being adopted.

Scarcely recognized at the beginning of this century, chronic rheumatism with articular deformity, which is described under the name of *nodose rheumatism*, has not been well understood till within a few years, and it is especially to the School of Salpêtrière and its eminent master, Prof. Charcot, that we are indebted for the exposition, both from the standpoint of symptomatology and pathological anatomy, of the palpable and striking differences between gout and arthritis deformans, to the latter of which even now some authorities persist in giving the name of *gouty rheumatism*.

Even if we well understood the lesions of chronic rheumatism (arthritis deformans), the pathogeny and the course of the affection, it must be confessed that the therapeutics of this disease has made little progress, and our efforts remain well-nigh impotent to arrest the progressive and invading march of those lesions which eventually constitute incurable infirmities, and condemn the unhappy patient to a life of invalidism.

The treatment of chronic rheumatism comprises external and internal means. The internal treatment comprehends but few medicaments; those most in use are arsenic and arsenical preparations, iodine and the iodides, and salicylate of soda. Arsenic is given

internally, as Charcot recommends, or employed in the form of arsenical baths (which have been especially vaunted by Noel Gueneau de Mussy); this treatment, whether it consists in the internal administration of arsenic or in the use of the baths, often provokes a return of the painful crises; hence this medicament should not be resorted to when there are any acute symptoms.*

However different these two modes of exhibiting arsenic may be, their principle of action is essentially the same, namely, by absorption of the medicament and its penetration into the economy, the rate of whose nutrition is raised. It must be confessed, however, that cutaneous absorption from baths is infinitesimal or nil.

Iodine has been employed in chronic rheumatism by Lasègue. He made use of the tincture, of which he was in the habit of giving large doses, as much as a drachm and a half a day (6 grammes). It is given diluted in water, or, what is better still, in a little old Spanish wine, which constitutes a mixture which is but slightly disagreeable and is easily taken with the meals. Instead of iodine, iodide of potassium may be given. Besnier proposes to give the iodide in syrup of coffee, which he thinks is the best adjuvant, and from 1 to 3 grammes a day (15 to 45 grains) may be given in this way. Iodine and the iodides in these cases acts especially by stimulating the organism and energizing nutrition. These are the most important indications to fulfil in the treatment of chronic rheumatism, and Garrod has justly insisted on this point in showing us that the dominant fact of the treatment ought to be to fortify the system and to excite the nutritive activity, which is considerably lessened; consequently, he recommends ferruginous preparations, cinchona bark, and, above all, cod-liver oil.

These indications are quite different from those which are appli-

*Gueneau de Mussy has recommended two kinds of arsenical baths; the arsenical bath pure, which contains from fifteen grains to two drachms of arseniate of soda per bath, and the compound arsenical bath, which, with the same quantity of arseniate of soda, has from three to five ounces of carbonate of soda. Apropos of the application of these baths, Gueneau de Mussy distinguishes two forms of rheumatism: chronic rheumatism, with little pain, and rheumatism with subacute attacks. In the first kind he would employ the compound arsenical bath, in the second the bath containing only the arsenical salt. The temperature of the bath varies from 86° to 95° F. (30° to 35° C.); as for its duration, that depends on the degree of excitability of the patient. (Gueneau de Mussy, Clin. Med., t. i. p. 271, Paris, 1874.)

cable to the treatment of simple gout, and which should make us altogether discard in the treatment of chronic rheumatism the alkalis, which are heroic medicines in the gouty diathesis. This prescription of alkaline preparations ought not to include salicylate of soda. Whatever Sée may have said, who has affirmed that salicylate of soda may cure chronic rheumatism, I have never obtained the same effects from it. Nevertheless, while recognizing that it is impotent to attempt to cure chronic rheumatism with joint deformities, the salicylate may be employed to advantage in the acute exacerbations which attend this disease; it diminishes, then, both the acuteness of the pain and the intensity of the febrile manifestations.

The internal treatment, then, of chronic rheumatism may be summed up in a few words: arsenic in appropriate cases, iodide in others, and salicylate of soda in the periods of exacerbation.

The external treatment is much more complex. It comprises, first, all the local means which I enumerated *à propos* of acute rheumatism, as well as most of the artificial baths which I have described; but to these means we must join others which have a very marked action in chronic rheumatism, in the first rank of which we place electricity. Whether the rheumatism has exerted its action primitively on the muscular tendons, or whether it has affected first the bony or fibrous parts of the articulation, it seems to be demonstrated that the deformities of chronic rheumatism, which are so numerous, depend on the retraction of certain muscular groups. There are even cases in which rheumatism very speedily causes atrophy of the muscles, producing in this way considerable loss of power in the limbs, and without any apparent deformity.

It is easy to understand the utility of electro-therapeutics in such cases. If you employ this agent you must use galvanic currents, which have an influence on nutrition in general, and that of the muscles in particular. Erb, Remak, Onimus, Jules, Cheron, etc., have long insisted on the remarkable action of these currents in causing the articular deformities gradually to disappear, and, for my part, I have obtained successful results of this kind which are really marvellous. You should then always have recourse to constant currents when the phenomena of muscular irritation have disappeared. If you resort to this powerful therapeutic agent in time, you will be able to restore movement and the use of the

affected joints, and to attain this you should, as Dally has recommended, associate massage with the employment of electricity. To these powerful means of treatment in chronic rheumatism, the methodical employment of mineral waters should be added.*

The necessity of tonic treatment should influence you in advising the dietary of these rheumatic patients, and all your efforts should be directed toward augmenting their nutrition. You should order a substantial nourishment such as red meats, generous wines, for, contrary to what takes place in gout, the uric acid diathesis does not exist in chronic deforming rheumatism. Urge the need of outdoor air and exercise, to combat the muscular atrophy of the members. You should especially insist upon the necessity of avoiding damp cold. The impression of cold is one of the most active causes in the production of rheumatism, whether it acts directly on the nervous system, as Heyman thinks, or in modifying the functions of the skin, permitting, as Hueter and Klebs believe, the introduction of organized phlogistic agents in the blood. This effect of cold is admitted by all observers, and is especially seen at periods of life when the body is most likely to be exposed to sudden changes in temperature; you must then avoid these variations of temperature and their results, which often depend on the rapid evaporation of perspiration, by making your patient wear flannel

* Walton (Mineral Springs of the United States and Canada) very properly divides rheumatics into two classes, those of the lymphatic temperament, and those of the nervous. In the former, waters rich in the sulphurets have seemed to produce the best results, and baths of a high temperature are indicated; in the nervous temperament, however, waters containing but a small proportion of these constituents and of moderate heat, like the Virginia Hot Springs, are preferable. The hot sulphur springs have been much recommended in the treatment of chronic deforming rheumatism; these benefit more by their elevated temperature than by any saline or sulphurous constituents. We have a great variety of such springs in this country. We may instance the so-called Hot Springs, in Garland county, Arkansas, whose waters resemble those of Gastein, in Austria, and Pfaffers, in Switzerland; the Calistoga Hot Springs, in Napa county, California; the California Geysers; the Santa Barbara Hot Sulphur Springs in Colorado; the "Warm Springs," in Madison county, North Carolina; springs of the same name in Meriwether county, Georgia; the Lebanon Springs, in Columbia county, New York; the Hot Springs of Bath county, Virginia; and, lastly, the Salt Lake Hot Springs, in Utah. The hot springs of Virginia and Arkansas are very fashionable places of resort; to the treatment by baths are conjoined massage and douches.

and shun exposure to the winds, and particularly to the west wind.

You should have a surveillance also of the dwellings of your patients, providing as far as possible that the conditions of the habitation shall be of a sanitary kind, with apartments airy and free, from moisture and the moulds which moisture generates—cryptogamic productions which Moses in Levitiens characterizes as the plague in the walls of the houses (Levitiens 14, 36, etc.) Therefore, whenever your patient is well enough off to afford it, you should insist on his avoiding the autumn rains, by going early to the winter stations. In a word, do not forget, gentlemen, that rheumatic arthritis, which has been called “poor man’s gout,” affects only those individuals whose nutrition is impoverished and enfeebled, and that all of your efforts should be directed toward restoring the forces of the organism and stimulating the nutritive exchanges. This it is that explains how the treatment by arsenic and the iodide of potassium, the tonic medication under all its forms, is of use in these cases without being able always absolutely to oppose the invading march of the disease, which is generally fatal in the end.

Gout presents quite different indications of treatment, and the adage that to contrary affections contrary remedies are indicated, is especially applicable to these two diseases, gout and chronic rheumatism, which, born of a common parent, are distinct diseases from a clinical as well as from a therapeutical standpoint. While we can observe at our hospital chronic rheumatism under all its forms (and grave cases are not wanting), we seldom or never meet with gout; or at least but one kind of gout is common in our wards, that from lead-poisoning, and I have already shown you, in my service, curious examples of this affection, whose description we owe to Charcot, Garrod, Ollivier and Lancereaux. But in your private practice it will not be so, and you will there meet with a considerable number of gouty patients, although their number tends to become less every day. This diminution results chiefly from the fact that the number of idle men tends also to decrease, and that the struggle for existence demands of almost everybody a certain amount of daily labor.

Without entering here into the details of the different theories that have been put forth as to the pathogeny of gout, it may be said that the humoral theory of the disease has always counted the most adherents. According to Sydenham, gout is the result of a peccant humor, a morbid matter, which nature endeavors to get

rid of. Substitute for these words *peccant humor*, *morbific matter*, uric acid and urate of soda, and you will have the theory to-day admitted by physicians generally; and notwithstanding the reserves recently formulated by Bouchard, it seems to be proved that every attack of gout is due to an excess of urate of soda. But it is not sufficient to know that this excess of uric acid is the first cause of gout, we need chiefly to know the reason of this accumulation.

Since the time when, in 1793, ninety years ago, Forbes Murray affirmed the starting-point of gouty symptoms to be the presence of uric acid in the humors of the economy, many hypotheses have been advanced to explain the first cause of this uric diathesis. Residuum of the imperfect combustion of albuminous matters, cinders, as it were, of the economy, uric acid is the result of the incomplete nutritive operations of the human system. Urea, which is a more perfect product of organic combustion, has an origin which varies according to the ideas advanced as to its production; thus it is that Provost and Dumas regard this substance as the result of an oxidizing process in the capillaries, while Robin and Bouchardat consider it as a product of disassimilation, and, on the other hand, Brouardel, Charcot and Murchison think that the liver chiefly is concerned in its elaboration.

Whatever theory one may adopt, the main fact that you should bear in mind is that there will be increase or diminution in the production of uric acid according as nutrition is perfect or imperfect. As for the accumulation of urea and uric acid, it may result from two causes which shed light on the pathogeny of gout. In the one case the uric diathesis has for its origin excess of production; in the other, the production remains the same, but there are troubles in the function of the kidneys which prevent the elimination of uric acid, and it is these two great factors which we shall have to study when we examine the prophylactic treatment of gout.

The medicines recommended for gout are very numerous; their number was considerable in the time of Lucian, if we may judge by his dialogue on gout.*

* What mortal on earth does not know that I am gout, invincible sovereign of all pains? . . . Pan, with his remedies, cannot triumph over me, though he be physician to the gods in Heaven, nor can Esculapius, son of Phœbus. The human race has in vain invented a thousand artifices against me. One, bruises plantain; another, celery; this one, lettuce leaves or wild purslane; that one,

In order to give system to the exposition of this subject, I shall consider it under several heads, and examine successively the treatment of gouty paroxysms, the treatment of gout apart from the paroxysms, and finally the hygienic and thermal treatment which occupies the first place among the prophylactic means.

Gout, as you know, manifests itself in paroxysms, and without giving you here a symptomatic description of these attacks, which have never been more admirably portrayed than by Sydenham in his treatise on gout, I will mention especially the dyspeptic prodromes and the pains in the joints which acute gout determines.

The perturbation of the functions of the stomach plays a considerable part in the attacks of gout, and this is so generally known that gout has even been attributed to functional derangements of the stomach. I have already spoken of these gouty dyspepsias in those lectures which treat of diseases of the stomach.

As for the pains in the joints, these affect, as you well know, in the great majority of cases, the metatarso-phalangeal articulation of the great toe, and cause horrible suffering. The skin over the inflamed joint takes on a violaceous tint, and has a shining aspect which enables you to diagnose a fit of gout at first sight. You know to-day that these joint phenomena are due to the presence in the interior of the articulation of crystals of urate of soda, and you are aware that the least disturbance of the limb will exasperate the pain; you also know that the urate of soda, the morbid agent of the gout, may cause certain saline deposits, known as *tophus*, around the joints.

But there is a disputed question which we must now meet, viz : whether it is best to treat at all a fit of gout. Moved by the grave accidents which may occur in the course of a gouty paroxysm, and

leeks, nettles and comfrey; others prepare ligusticum, wild parsnep, peach-leaves, henbane, poppies, boiled onions, pomegranate bark, flea-wort, hellebore, fennegreek infused in wine, frog-spawn, cypress gum, brine, sheep-dung and other excrements. Who does not know that there is no insect or animal so vile as not to have entered into the composition of some of these specifics? What minerals have men not tried, or what vegetable production? What excretion too abominable for medicinal use? . . . But I, who cause the whole earth to weep, only irritate myself the more against those who employ these means, and who attempt to drive me away. Those, however, who make no resistance, I often treat with kind and benevolent consideration."—*From Lucian's Dialogue on Gout.*

especially struck by the disappearance of the gouty symptoms when visceral complications arise, the older physicians assigned an important part to metastasis in the production of these phenomena of visceral gout. Adopting in their entirety the ideas of Sydenham, they thought that it was dangerous to interfere in the gouty paroxysm for the reason that the attack was the result of a tendency on the part of the economy to throw out peccant humors; if this elimination did not take place, they thought that this morbid matter, attacking the lungs, heart and brain, would produce very serious complications referred by them to retrocession.

Thanks to the progress of pathological anatomy, we have an explanation more true, more scientific and more exact of this metastasis, and we know to-day that it is occasioned by uræmia. In fact, the kidney plays an important rôle in the symptomatology of gout. Under the influence of the constant irritation which is determined by the passage of urine loaded with uric acid, the renal canaliculi become inflamed or obliterated in part, and then supervenes either interstitial nephritis or fatty metamorphosis of the kidneys, and it is to this aggregate of lesions that the name of gouty kidney has been given. These lesions, by impeding the functions of the renal filter, entail consequences more or less grave, some pertaining to uræmia, others having a marked influence on therapeutics, and explain why certain medicines administered to the gouty, have even been attended with fatal results.

We find here also an application of a fact to which I have called your attention before in the course of these lectures. It is that when elimination by the kidneys is at fault, you obtain not the medicinal effect desired, but the toxic action of the substance which you employ. This, too, explains why our forefathers were afraid of active interference in gout; it also shows the necessity of great prudence in the treatment of this disease, and careful daily examination of the urine, and this, not only with reference to the albumen which it may contain, but also to the extractive matters in that excretion. These reserves being made, I believe it to be the duty of the physician actively to treat attacks of gout, discarding altogether the precept of Cullen, who summed up in the two words, "patience and flannel," the whole treatment of gout.

A great number of medicaments have been proposed for acute gout—antiphlogistics, purgatives, sudorifics, specifics, etc. Blood-

letting, whether general or local, once more in usage, as, for instance, in the celebrated remedy of Paulmier, which consisted in the application of twenty or thirty leeches around the joints, is completely abandoned. Nevertheless, Garrod thinks that in certain exceptional circumstances one may have recourse to local emissions of blood with advantage, and Gairdner is of the same opinion. However, it is not easy to see what good this local bleeding can have in acute paroxysms, being powerless to modify the uric diathesis—the cause of the affection.

As for sudorifics and purgatives in this disease, their value has long been discussed. Among the first, guaiacum deserves a place, once of great reputation as a specific in gout, and Ackermann, Metzger, Weismantel, have vaunted its anti-arthritic properties. The essence of guaiac serves as the basis of the celebrated remedy of Carabes, the anti-gouty syrup of Boubee, and the syrup of Vicq d'Azyr and of Gall.*

To-day guaiacum is almost completely abandoned, and if it were desirable to resort to sudorifics it would be better to employ jaborandi and pilocarpine. But although urea does to some extent undergo elimination by perspiration, this elimination is too insignificant to afford a real relief to the patient, and while recognizing that it is a good thing to promote the functions of the skin during the fit of gout, I do not think that we can count much on sudorifics to the exclusion of other remedies.

*The famous remedy of Carabes is principally composed of the alcoholic tincture of guaiacum. The anti-gouty syrup of Boubee has this formula,

R.—Sarsaparilla root,		40 parts.
Resin of guaiacum,		15 “
Jalap,		9 “
Mustard,		9 “

Mix.

Boil in 300 parts of water for two hours, and add sugar enough to form a syrup.

The anti-arthritic pills of Vicq d'Azyr have also guaiacum for a basis; the formula is as follows:

R.—Castile soap,		4 parts.
Ox gall,		2 “

Mix and incorporate guaiacum resin, calomel, of each 1 part.

M.—Make into pills, each weighing 20 centigrammes. Dose, one or two morning and evening.

The pills of Gall contain, besides extract of guaiac, a little antimony and opium.

It is the same with purgatives, to which Scudamore had attributed curative virtues in the attack of gout, while Sydenham, on the contrary, discarded them altogether. Purgatives have no other effect during a fit of gout, than to keep the bowels open, and this is generally necessary by reason of the constipation which is habitual in such cases. The purgatives to which you should always have recourse are chiefly mineral waters, such as those of Hunyadi Janos, Pülna, Carlsbad, the American Hathorn water, etc., which should be given only in sufficient quantity to maintain regular action of the intestines.

I pass rapidly over mercurial treatment, vaunted by Musgrave and Hamilton; antimonials which serve as a basis for Quarin's cure (of precipitated antimony and phosphate of lime), and James's powder (of precipitated antimony and phosphate of lime), to come to medicaments which have a real specific action in gout. I refer to sulphate of quinine, to colchicum and to salicylate of soda.

Influenced by the intermittency which characterizes the gouty paroxysm, quinine has been recommended in its treatment, and it is doubtless true that this medicine mitigates, to some extent, the intensity of the attack. Quinine may be given with other medicines, and especially with colchicum. Colchicum is the veritable specific in gout, and Fievée has gone so far as to affirm that colchicum is to gout what quinine is to fever and ague. Nevertheless, colchicum is absolutely an empirical medicine, for if clinical experience every day witnesses its good effects in gout, experimental physiology has little to say in explanation of those effects.

Colchicum is a bulbous plant with violaceous flowers, which flourishes in abundance in our meadows, and which our herds carefully shun, for it constitutes for them a poison of great activity. The bulb, the seeds and the flowers are used in medicine, being made into tinctures, alcoholic extracts and wines, which are the modes of administration most often employed. As the different parts of the plant do not contain the same quantity of active principle, it is necessary to specify in your prescriptions the part of the plant which you desire to administer. Although the tincture of the flowers, known under the name of Hahnemannian tincture, has been vaunted by several authorities, and in particular by Debout, it is generally preparations of the seeds which you should order, and you can administer the tincture and the fluid extract in the dose of ten

drops to a teaspoonful daily, watching carefully the result of your doses, for the therapeutical effect varies according to individuals. Some can bear large doses without inconvenience, while others experience toxic results from very small doses. These troubles consist, as you know, in diarrhœa and vomiting; these effects you should avoid. You ought then to order the tincture of colchicum in doses consisting of a certain number of drops, remembering that twenty drops weigh thirty-nine centigrammes. You can give twenty drops morning and evening without any inconvenience, and increase the dose according to the needs.

But you will ask, since the active principle is unequally distributed in the plant, why not give this active principle itself? Here we find ourselves in the same embarrassment as in the case of digitalis, and just as there have been found several digitalines, so there have been found several active principles in colchicum. Hess and Geiger, for instance, have extracted from colchicum *colchicine*, Oberlin, *colchicine*, Hubler, still another alkaloid, so that the question of the veritable active principle of colchicum is still undecided. Therefore, in the midst of this uncertainty, I think it is better, as in the case of digitalis, to employ the plant itself, indicating, as beforesaid, the tincture of the seeds, or root, or whatever other preparation you wish to employ. The tincture of colchicum may be associated with other circumstances, and it is this combination which characterizes the majority of the popular remedies for gout, such as Laville's tincture (liqueur Laville), the wine of Anduran, the tincture of Cocheux, the pills of Lartigue, and many others, which I pass over in silence. If you do not desire to recommend any of the proprietary nostrums, you can prescribe combinations just as useful, such as the following, which is a good formula :

R.—Tincture of colchicum,

Alcoholic tincture of aconite root,

Compound tincture of jalap,

Tincture of quinine, ... āā ȝ ss.—M.

Sig.—Thirty drops, morning, noon and night, in a wineglassful of some bitter potion, such as infusion of *fraxinus excelsior*.

The European ash has had a great reputation in the treatment of gout, and Pouget and Peyraud consider it as a genuine specific. Moreover, the number of indigenous plants regarded as antiarthritic

is considerable, and to give you an idea how numerous they are, you have only to refer to the electuary once vaunted by Sydenham (this electuary consists of twenty-nine articles). Among these plants I will mention only one—aconite, whose administration mitigates the pains from which gouty patients suffer ; therefore, I think that it is always well to combine aconite with your colchicum. Alkalies have little curative action in acute attacks of gout, and constitute only an adjuvant medication. During my trials with propylamine and trimethylamine, I obtained in certain patients (and in particular an illustrious marshal of France) disappearance of the gouty attack under the influence of these medicaments ; but now, these ammoniacal compounds deserve to give place to a medicine much more energetic and certain, viz : salicylate of soda.

Salicylate of soda has an evident curative influence in gouty paroxysms, and it owes its action to several causes : first, because it favors elimination of urea and uric acid (you know, in fact, that salicylic acid is eliminated in the urine under the form of *salicyluric acid*) ; next, because this medicament is a powerful analgesic of the articular pains ; and, finally, because it has an antipyretic action similar to that of quinine. Therefore, German Sée has rightly insisted on the advantages which may be derived from salicylate of soda in the treatment of attacks of gout, and here the rules of administration are the same as for acute articular rheumatism. But it is necessary in these cases to pay particular attention to the state of the kidneys, for as I have already told you, the impermeability of the renal organs may render the administration of salicylates dangerous, and this it is that explains the divergence of opinions which have been put forth respecting the advantages and inconveniences of this medication in gout.

The external treatment of gout is a matter of much less importance than the internal medication. Many local means have been recommended in the acute paroxysms, from ointments and pomades in current use, to more complex formulas, and even to *horse-chestnut oil* ; from applications as hot as can be borne, to the use of ice around the joint—all have been counselled in these arthritic inflammations. I believe, and in this I am supported by Garrod, that all these applications are useless, and even dangerous. It suffices to consider the state of these joints, the fiery redness of the skin around them, the pain of which they are the seat, to convince one that frictions of an irritant

nature may inflict grave disorders on the cutaneous surface thus inflamed. Therefore, in view of the trifling benefit of these local applications on the one hand, and their danger on the other, I advise you to discard all these pomades and ointments, and to surround the foot with a layer of finely carded cotton, which will give immobility to the affected joints and protect them from the air.

To sum up, then, when you are called to treat an attack of gout, you will first assure yourself, of the integrity of the kidneys, then you will administer salicylate of soda in doses of from one to one and a half grammes, or, if you prefer, the tincture of colchicum seeds combined with quinine or strong tincture of aconite root. If, on the contrary, the kidneys are damaged, or if the heart seems to be degenerated, you will have to content yourselves with giving alkaline dilutents and keeping the bowels open with saline purgatives; besides enswathing the affected member with wadding around which is placed oiled silk.

But it is not enough to combat the attack of gout, something must be done to prevent its return, and here we have many means at our command, both pharmaceutical and hygienic. Whatever theories may be admitted in explanation of uræmia, it is against this condition that all our efforts should be directed; here, then, is the place for the alkaline medication under all its forms. It will be more brief in the exposition of this part of my subject, because I have already, in a former lecture, spoken to you of the treatment of the uric acid diathesis.

All the alkalies may be employed, soda as well as potassa, but there is one that seems to me better than all the others, viz: "lithia," which Garrod recommends. I need hardly tell you that the dose of carbonate of lithia is seven or eight grains (fifty centigrammes) given at meal-time in carbonic acid water; the effervescent salts of lithia are good preparations. Benzoic acid and the benzoates have also been highly extolled, and combinations of benzoic acid with alkalies are in use, such as the double benzoate of soda and lithia, which is an excellent preparation.

By the side of the alkaline medication, certain tonics and stomachics deserve a place, being much in repute. These are principally bitter preparations, furnished by our indigenous flora, constituting anti-arthritic remedies more or less complex, such as (to name those most known) the "electuary of Sydenham" which I have before mentioned,

and the famous remedy of the "Duke of Portland." These nostrums, once the subject of much discussion, have now happily passed into oblivion, and given place to quassia and cinchona bark, which are of some little efficacy in atonic gout.

As you perceive, the pharmaceutical treatment of gout in the interval of the attacks is limited to the administration of alkalis in all their forms and bitters and other tonics. Add to these means the thermal treatment, which plays a considerable part in the therapeutics of this disease. Three stations among all those which have been considered as suitable for podagrous patients ought to attract your attention, viz: Vichy, in France; Wiesbad, in Germany; Carlsbad, in Bohemia.

There has been much discussion concerning the mode of action, the advantages and disadvantages of Vichy water in gout. To-day this question seems to me decided, and I have already given expression to my views on this subject under the head of "renal lithiasis." It is not by neutralizing the excess of uric acid that these alkaline waters act, it is by their influence on the general nutrition, whose functions they regulate. But I am well aware that it will not do to exceed certain quantities, and that the treatment by alkaline mineral waters is not altogether unattended with evil. You should then send to Vichy your strong and plethoric patients whose nutritive functions are below par, and you should proscribe these waters to weakly patients whose attacks are but little accentuated—in a word, who have the symptoms of what has been described under the name of atonic gout and gouty cachexia.

The Carlsbad waters act like those of Vichy, always with this difference, that they are purgative. They suit admirably gouty patients with hepatic congestion and gastro-intestinal troubles, characterized by constipation or irritation of the stomach and bowels, provoked by excess of the table. Wiesbad belongs to the sodic chloride waters, and is applicable rather to the arthritic diathesis than to gout itself. The Aix la Chapelle waters, as well as those of Ems and Royat, which are all sodic chloride waters, act also by the lithia which they contain, and combat rather the multiple manifestations of the arthritic diathesis than the excess of uric acid itself. These are very useful spas, to which you would do well to refer a large part of your chronic rheumatic patients.

Hygiene plays a considerable part in the prophylactic treatment

of gout. Everybody is agreed that gout, aside from the laws of heredity, is the consequence of defective hygienic conditions, the uric diathesis, which is its starting-point, being an evidence that the azotized materials introduced into the economy there undergo an incomplete combustion. We have, then, two great factors in the pathogeny of gout: too abundant alimentation, too little muscular exercise. Gout is a disease of the rich, and this is a fact on which have insisted all writers from the most remote antiquity. You should, then, have a care over the alimentation of your gouty patients and proportion it to their muscular work. You should look after not only their solid food, but also their daily beverages, alcoholic excesses having an important influence in the etiology of gout. In fact, for ages attention has been called to the influence of spirituous liquors on the development of this disease. Wines that contain too much alcohol, as well as strong beers, should be interdicted altogether; although Garrod has condemned cider, I do not believe that this beverage can give rise to gout; I think there may be cases in which it may be beneficial.

But if the dietary of the gouty patient needs to be carefully regulated, it is just as necessary to prescribe suitable muscular exercise of all kinds; gymnastics, fencing, pedestrianism, all should be employed, and as our immortal fabulist has said:

Goutte bien tracassée,
Est, dit on a deum pansee.*

—*Medical News.*

A NEW SYMPTOM AND A NEW THEORY OF LOCOMOTOR ATAXY.

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There is no disease in the whole range of pathology which may commence in such extremely different ways as tabes spinalis, or locomotor ataxy; and it is undoubtedly this circumstance which accounts for the mistakes which have been, and are even now, so

* Which may be thus rendered: "Gout well exercised is half cured."

frequently made in the diagnosis of the earlier stages of that disease. We may, at the same time, have a number of patients under care who are all in the first stage of tabes, and who have yet hardly a single symptom in common. One of them may complain of loss of sexual power ; another of hyperæsthesia in the back ; a third of a troublesome form of indigestion, and a sensation of tightness round the stomach ; a fourth of rheumatic or neuralgic pains ; a fifth of failure of sight, and double vision ; a sixth of feeling of intense lassitude and exhaustion. This shows the great importance of being intimately acquainted with all the truly protean forms which this extraordinary malady may assume ; an importance which is by no means only theoretical, but chiefly practical ; for it is in the first stage of tabes that our therapeutical efforts are more likely to be crowned with success than at any later period in the evolution of the disease.

The principal new symptom which appears in the second stage of tabes, and which imparts an entirely new aspect to the malady, is that of ataxy. From this time forward, ataxy overshadows, more or less, all the other symptoms, with the result that patients in the second stage of tabes resemble one another a great deal more than in the first. The extreme differences which exist in the first or pre-ataxic stage begin now gradually to fade away, and the diagnosis is rendered proportionately easier.

I have been led, by long-continued observations on numerous cases of this disease which have happened to come under my care, to distinguish three different epochs or periods in the development of the ataxic stage of tabes. Such a distinction has not hitherto been made, but I believe that it will be found to considerably facilitate the study and comprehension of the different aspects which this important symptom is apt to assume at different times in the progress of the disease. These periods I will characterize as follows :

1. The initial period, in which ataxy is so slightly marked, that a skilled exploration is required to discover the symptom.
2. The truly ataxic stage, in which the peculiar walk known as the ataxic gait, is observed ; and,
3. The period of muscular madness, in which even the typical ataxic gait is no longer possible, and muscular action, as far as it still exists, is in utter confusion.

The transition from the first to the second period of the disease is

often so slow and gradual as to be almost imperceptible. Indeed, the muscular disorder may at first be so trifling, that the patient succeeds, by slight unconscious efforts, in obviating any actual inconvenience.

At this initial period of the second stage of tabes, a skilled objective exploration of the patient's condition is of paramount importance. The subjective symptoms of which he most complains are often misleading and comparatively insignificant; while the principal objective sign is often so concealed that only the specially trained observer is able to recognize and appreciate it. At this time a patient may still be able to walk four or five miles at a time without much fatigue, and often scouts the idea that there is anything wrong with his walking powers. It is, therefore, necessary to make him go through a certain number of tests, some or all of which, when ataxy is present, will infallibly reveal it. The more important of them are, to watch the way in which the patient gets up from a chair or a couch; to make him stand with his feet close together, or on one leg, and with his eyes closed; to make him turn round quickly; and to go down-stairs; when certain peculiarities will, in a general way, be noticed, which will betray the ataxy.

In addition to these tests, I will now describe another symptom, which I have not seen mentioned in any previous treatise on this disease, and which is, that the patient has a considerable difficulty in walking backwards. This faculty, which is chiefly practised and valued by courtiers, is nevertheless possessed by all ordinary mortals as long as they are in good health. For the tabid patient, however, it is mostly very difficult to walk backwards, at a time when he may have very little or no trouble in walking forward. His heels seem to catch the ground; he dare not move, for fear of falling; and, if he succeed at all in walking backwards, it is in a peculiarly halting and odd fashion, which at once attracts attention.

I noticed this symptom for the first time in the case of a gentleman, aged twenty-four, who consulted me in February, 1882, and who was, in consequence of certain official duties, obliged to walk backwards a good deal. For years this had been the easiest thing in the world for him; but during the last six months he had been mortified to find that he experienced considerable difficulty in accomplishing this feat. He told me that his health was otherwise excellent, with the exception of "rheumatic pains" in the limbs, to which

he had been subject, off and on, during the last three years. I then examined him for the patellar tendon-reflex, and found it absent in both sides. In the further course of the interview I elicited that the patient had had syphilis ten years ago ; that he had a temporary attack of double vision three years ago ; that there was, occasionally, incontinence of urine in the morning, and habitually a feeling of numbness in the soles of the feet. The patient was still able to walk exceedingly well in the daytime and on a level road, but had found difficulty in walking in the dark. He went satisfactorily through most of the other tests, showing that he was just in the commencement of the second stage of tabes. The walking backwards was, indeed, the most troublesome thing he had to contend with ; and the contrast between the clumsy and awkward way in which he did this, and the apparent ease with which he walked forward was indeed striking. When attempting to walk backwards, his heels seemed to become entangled in the carpet ; he evidently did not know how to raise his feet properly from the ground, and on one occasion he would certainly have fallen unless I had supported him. All the muscles of the thighs and legs seemed to become rigid the instant he attempted to walk backwards, while in walking forward he appeared to have no difficulty whatever in bending his knees to the proper degree.

Since then I have made it a point to inquire about this symptom in patients suffering from tabes, and have found it present in the majority of cases. In an artist who is now under my care, this difficulty is particularly annoying, because it prevents him from taking a perspective of his pictures by walking backwards from his easel. In this case there are no symptoms of tabes above the waist, so that the patient is able to paint as well as ever.

In difficult or doubtful cases, therefore, more especially in those at the very threshold of the ataxic stage of tabes, the symptom I have mentioned may put us on the proper track, and lead us to examine the patient who shows it for other symptoms of the malady. As tabes is still frequently confounded with gout, rheumatism, neuralgia, dyspepsia, idiopathic amaurosis, and other conditions, any addition to our means of diagnosis for that stage where the malady is not yet fully developed must be welcome, and this has been my reason for submitting it to your notice.

I now proceed to the second part of my paper, namely, to develop,

as concisely as possible, the theory of the symptom of locomotor and static ataxy which I have, after careful consideration, been led to adopt.

Time prevents me from entering fully into the other theories which have been put forward, and I will therefore only mention that the two principal ones which count most adherents are one first propounded by Leyden, and another given by Erb.

Leyden's theory, which has also been advocated and developed by Pierret, is that all motor disturbance which takes place in tabes, is to be explained by the influence which sensation is known to have on motion, and by the intimate relation existing between the motor and sensory tracts. He points to the fact that that portion of the cord which suffers in tabes is notoriously concerned with sensation ; that the latter function always suffers in tabes, and that the affection of sensibility is, if not absolutely, at least tolerably proportionate to the degree of ataxy which may be present.

Erb, on the other hand, considers that ataxy is a true motor symptom, and not in any way connected with or dependent upon the anæsthesia, which is generally present at the same time. He finds that frequently the degree of ataxy is by no means proportionate to the degree of anæsthesia which may be found, and that complete anæsthesia, at least on one side of the body, has been without any ataxy at all. For these and other reasons, Erb assumes the existence in the cord of special co-ordinating centrifugal fibres, and thinks that these may be situated either in the central grey matter, or in a portion of the lateral columns, and that disease of these centrifugal fibres is followed by the appearance of locomotor ataxy.

It thus appears that the two principal representatives of German pathology of the present day differ *toto caelo* in their views of this subject, neither view seeming to explain to complete satisfaction the phenomena which are observed. A careful critical consideration of the different points in dispute seems, therefore, necessary in order to enable us to arrive at a satisfactory conclusion.

Let us, then, first, shortly consider the facts of normal and morbid anatomy and physiology which are at our disposal. We know that the posterior columns consist of two different systems, firstly, Burdach's columns, which have to be looked upon as short conducting paths ; and secondly, Goll's columns, which system of fibres is made

up of long conducting paths. Burdach's columns are direct continuations of posterior root-fibres, and connect the cord with peripheral parts, and thereby with external influences. They also send out numerous fibres, which proceed in various directions into the central grey matter, and which are evidently intended to connect the different segments of grey matter with each other, while others proceed upwards into the medulla oblongata, where they terminate. Goll's columns, on the other hand, are long conducting paths, which proceed from the central grey matter up to the medulla oblongata, and appear, from their anatomical peculiarities, intended to connect extra-medullary centres in the brain and cerebellum with physiologically identical fibre-systems at different levels of the cord.

It seems, *primâ facie*, reasonable to assume that the various commissures which establish a connection between extra and intra-medullary centres, are intended to put all of these into mutual functional relations, and to form a path for producing a physiological consensus between them. Destruction of the anatomical commissures by disease would, therefore, naturally be expected to lead to a cessation of at least some degree of functional harmony.

Experimental physiology, on the other hand, has hitherto given somewhat ambiguous results. If it could be proved that the posterior columns contain centres of co-ordination, or if not centres, at least paths for the same, everything would be comfortably settled. Goltz, however, who has more particularly studied this question, has come to the conclusion that no centres for the co-ordination of complex movements exist, either in the posterior columns, nor in fact anywhere throughout the entire extent of the cord; but that such centres are to be found in the brain, more particularly in the corpora quadrigemina, the optic thalamus and the cerebellum. Woroschiloff's experiments on the paths by which the co-ordinating impulses travel from the brain to the muscles, tend to show that, at least in the rabbit, these paths are situated in the middle third of the lateral columns of the cord, and do not touch the posterior columns at all.

The physiology of the posterior roots is somewhat better known than that of the posterior columns. If the posterior roots for one hind-leg be divided in a frog, the movements of that leg are seen to be out of harmony with the other, whether for jumping, swimming, or other modes of locomotion; and when such an animal is

held between the fingers, the affected leg will not carry out the movements intended for the purpose of escaping, as is done by the non-operated leg. After experimental division of the whole of the posterior roots, a frog when put into water, is seen to be unable to swim, and to give himself up to ataxic movements.

It is important to notice that impressions which are solely furnished by the skin, are not indispensable for locomotion. Thus Claude Bernard has shown that a frog whose skin was entirely removed, could still swim well ; while destruction of the posterior roots at once abolished that power. This fact has a distinct bearing on those cases where ataxy has been observed, together with normal sensibility in the skin. Our notions of the position of our limbs are likewise determined by the more deeply situated structures, such as muscles, ligaments, cartilages and bones, which may lose their sensibility independently of that of the skin. It is true that in many cases of hysterical hemianæsthesia the movements of prehension, locomotion, etc., are reported to have been normal ; but there are other cases in which unquestionably ataxy of movements existed under such circumstances. In a girl, aged 11, who was a short time ago under my care at the hospital, there was, on admission, hemianæsthesia of the entire left side of the body, which had apparently come on through hæmorrhage into the most posterior portions of the internal capsule at the time of birth. The affection had continued unaltered all her life, until she came under my care, but yielded nevertheless to a single application of electricity. There had been no sign of paralysis at any time ; and the girl was found, on examination, to be well able to carry out all simple movements with the anæsthetic limbs which I asked her to perform. At the same time there was decided ataxy in the left hand. The girl was able to play the piano with the right hand, but could not do so with the left ; she had great difficulty in picking up a pin with her left hand, and in doing any useful complex actions ; yet the muscular force, as tested with the dynamometer, was quite normal. The use of the hand for finer movements improved only gradually after sensibility had been established.

The anterior cornua of the central grey matter of the cord contain the centre of muscular power and tonicity, while the volitional impulses of motion originate in the central convolutions bordering the fissure of Rolando. Co-ordination of the action of the motor

nerves and muscles is, however, not affected either in the Rolandic convolutions or in the grey centre of the cord ; but in the central ganglia of the brain, namely, the corpus striatum and thalamus opticus, which communicate through the white internal capsule with the higher motor centres above, and the lower centres further down. The central ganglia have the special function of rendering movements which are intimately connected with sensations, and which are, in the first instance, only excited by conscious volitional effort, mechanical and automatic. Walking and other complex movements have to be learnt early in life by countless conscious efforts on the parts of the hemispheres ; and full attention is necessary in the beginning to enable us to carry out such movements in a proper manner. Eventually, however, less and less effort is required for executing such movements, which at last are performed without any attention to them on the part of the grey surface of the brain. A man who is in the habit of writing much, never thinks of the way in which he forms letters on the paper, over which his pen seems to fly quite mechanically. If each time we carry out complex movements a special conscious effort were necessary, the time at our disposal would not suffice for a hundredth part of the work which we actually get through in life ; and some forms of activity, such as finished piano and violin-playing, would be utterly impossible.

In order, however, that the central ganglia shall be able to thus minimise the work which has to be done in life, it is necessary that they should constantly receive accurate information of the position of our limbs and the nature of the obstacles with which the latter come in contact. We may be able to walk fast enough on a smooth level road without thinking about it ; but if the pavement has been taken up, or if we have to walk across a newly ploughed field, or on the edge of a precipice, or on a narrow bridge or plank thrown across a stream, or in a crowded thoroughfare where hansom-cabs, omnibuses, perambulators, tricycles and foot-passengers jostle each other, or in the dark on a staircase with which we are not acquainted, then a considerable amount of attention is required for overcoming obstacles in our way, and guiding ourselves along with safety. The mere impressions conveyed to the central ganglia by the posterior columns are then no longer sufficient ; but the aid of the eyes, or, in the case of the dark staircase, of the hands and arms, is instinctively called in, in order to supplement the ordinary sensitive

impressions by special information and manœuvring. We therefore, under those circumstances, behave like the ataxic does habitually, that is to say, we use our eyes as crutches, and manœuvre with our hands and arms to assist us; and even then we do not walk as well as we do on a smooth level road, where there are no impediments of any kind to overcome. The ataxic, therefore, is habitually in the condition in which we are under such special circumstances only as I have just mentioned. The information habitually given to the central ganglia by the posterior columns, is not available for him, because those columns have ceased to exist, and the various groups of ganglionic cells can therefore no longer be combined for synergic, orderly, or purposive action. There is no longer any harmony between the muscles which act, and their antagonists which regulate the action; wrong groups of muscles are called into play, which impair the action instead of facilitating it; and there is therefore useless expenditure of nerve-force, causing fatigue.

The mode of production of locomotor ataxy thus appears satisfactorily explained; it only remains for us to account for the phenomena of static ataxy which are generally associated with the former in tabes.

The cerebellum, which was once believed to be the seat of the reproductive faculty and desire, is now known to be the centre of equilibration of the body. Removal of this organ in an animal causes static ataxy; the animal cannot keep steady on its legs, but staggers about as if drunk. It is not paralyzed, and endeavors to carry out certain movements; but there is an utter want of precision, and even the most desperate efforts do not succeed in steadying it. The behavior of animals deprived of their cerebellum, in fact, resembles, in the closest possible manner, that which takes place when the ataxic attempts to stand on one leg, or on both, with his eyes closed, etc. The erroneous information which the cerebellum receives from the diseased posterior columns may, however, be, to some extent, corrected by sight; and this accounts for the fact of standing being so much more difficult when the eyes are closed (Romberg's symptom), as well as for the other phenomena of static ataxy. Whether the paths through which information is given to the cerebellum are situated in Goll's columns, in which case the road would be somewhat more indirect, or in the direct cerebellar strands

of the cord, which would carry information in a straight line to the cerebellum, we are at present not in a position to determine. We may, however, take it as an indisputable fact that locomotor ataxy is caused by an interruption of the paths between the posterior roots and the central ganglia of the brain, through sclerosis of the posterior columns, and that static ataxia is, in its turn, brought about by an interruption of the paths between the posterior roots and the cerebellum, through sclerosis either of Goll's columns or of the direct cerebellar strands.—*The British Medical Journal*.

ORIGINAL COMMUNICATIONS.

PYURIA AND ITS TREATMENT.

By Dr. R. ULTMANN, Privat. Docent. University at Vienna.

Translated by Dr. GEO. G. KINLOCH, of Charleston, South Carolina.

If pus is discharged with the urine, sometimes in a small, sometimes in a large quantity, this condition is called pyuria, or pus urine. It is self-evident that with the expression "pyuria" a diagnosis can be thought of only in the general sense of the word. This is an expression such as those much used in past times, and which to-day would be seldom employed, and only in special cases—the same in regard to hæmaturia, albuminuria, etc. With the progress of medical diagnostics these general and vague diagnostic expressions gradually disappear, and so also we set aside to-day the idea of pyuria as sufficiently expressed of many kinds of diseased conditions of the conducting parts of the urinary apparatus, which now can be positively diagnosed by the aid of special instrumental investigation, by the help of the microscope and by chemical examination of the urine. In the following all those processes will be given which lead to the diagnosing of the seat of affection. Before, however, taking up the consideration of these, we will speak

of pus in general, as the essential constituent of pyuric urine, and at the same time will present the most important conditions which lead toward the recognition of the same.

PUS.

Pus consists of cells elements—the *pus corpuscles* and the fluids in which they are suspended, the *pus serum*. If urine contains pus, then it must contain at the same time both these constituents, viz : the cells and the serum.

The pus corpuscle will usually be discovered by the aid of the microscope ; the serum by chemical means, through the presence of albumin. Since the pus is made up of cellular elements, the urine which contains pus must necessarily appear more or less cloudy according to the amount of pus present. If urine which has only recently been passed appears clear and transparent, it cannot contain pus.

The color of purulent urine corresponds to the (at times) coloring matter of the urine, at one time a light, at another a dark wine yellow. The pus itself has a greenish yellow color, producing, though, a changed appearance in the urine only when it is present in large quantities. The natural color of the pus is much more apparent when it is deposited from the urine as a compact sediment. Pus has an alkaline reaction, but this alkalinity is usually insufficient to exert a perceptible influence upon the reaction of the urine. Only when pus is present in large quantities can the acid reaction of the urine be neutralized by the alkalinity of the pus serum to more or less extent.

THE PUS CORPUSCLE.

The pus corpuscles are identical in their form with the mucus corpuscles, also with the blood and with the lymph corpuscles. One is then not always able to tell simply by a microscopic examination whether urine contains pus, or whether there is only an increased mucus secretion present. Here the chemical examination solves the question. For example, if the urine, by the examination with the microscope, seems to contain pus cells, and at the same time shows chemically a certain quantity of albumen, and the latter has no other source than the pus serum contained in the urine, we may be certain that the cells seen under the microscope are pus corpuscles,

and we can declare that such urine contains pus; if the urine, on the other hand, contains no albumen, we have to do only with an increased mucus secretion. *In order to diagnose pus, albumen must always be discovered in the urine.*

The pus corpuscles, examined microscopically, appear colorless. They are a little larger than the red blood cells measuring 1-80 to 1-100 mon. in diameter. They appear, also, specifically heavier than the blood corpuscles; for let urine settle which contains at the same time intact blood and pus corpuscles, and it will be found that the pus makes up the lower layers of the sediment, while above is seen an intensely red layer of blood corpuscles.

Pus corpuscles appear in acid urine under two forms. We find them either in the shape of a globule or as an irregular, and at times projecting mass. The first is the more frequent. Vogel has already drawn attention to these different forms as seen in urine, and asserted that the finding of the irregular forms determined a worse prognosis. Indeed, these irregular varieties are found usually in the obstinate and long-continuing pyurias, where, as in the slight catarrhs and those of short duration, the round form predominates. It is usually the case that where we find the polymorphous pus cells in urine sediment the round ones are wanting, and *vice versa*. Still in a very few cases both forms are present. The pus corpuscles appear slightly granular and show no nuclei, but their appearance is changed in accordance with the degree of concentration of the urine, amount of salts present and the reaction observable. In acid, concentrated urine, abounding in salts, they are small and granular; in alkaline urine, on the other hand, or in that of light specs. grav., they appear large and swollen, the granulations of the protoplasm disappear, and the nuclei can be distinctly seen. In *very* dilute urine the pus corpuscles can be found twice or three times as large as those existing in the normal and concentrated kind. This is the change which is known to take place in the pus corpuscles when distilled water is added to them. The alkalis (it is true especially of the carbonate of ammonia) of the urine, with ammoniacal fermentation, cause the pus corpuscles to swell still more, and eventually to melt or dissolve into a mucus-like mass, in which one can no longer define their contour, but only the nuclei which have been set free. With iodine dissolved in iodide potassium, the pus corpuscles are stained a beautiful yellow,

and the neuclei, which come prominently forward, appear dark, of a brown yellow color.

PUS SERUM.

The pus serum (intercellular fluid) is an opaque fluid, slightly yellow, and with an alkaline reaction. The alkalinity depends on the presence of carbonated and alkaline and earthy phosphates. The chief part, though, of the pus serum is the "serum albumen." This is not different from that of the blood serum. The pus serum contains, besides, a little paraglobulin and an alkaline albuminate. Since, as is seen from the above, a purulent urine must be cloudy, and must contain albumen according to the amount of pus present, we succeed best, by the following method, in discovering pus in urine: Fill an ordinary test-tube nearly to the top with the urine to be tested, then heat the *upper* half of the fluid *gradually* to boiling. An increased cloudiness of the heated half (which can be seen by comparing this with the lower and unheated part) denotes the presence of albumen, if, on the addition of 1-2 drops of acetic acid, the cloudiness does not disappear. The different factors in producing cloudiness in urine may be recognized by the following scheme. It is true it is not *always* absolute, but nearly so, and it will be of service to the practical physician on account of its simplicity and the easy mode of carrying it out:

CLOUDINESS IN URINE.

By gradual heating of the fluid to boiling

It disappears.	It becomes denser.	It remains unaltered even after the addition of acetic acid.
The cloudiness is due to Acid Urates. (Brick dust sediment.)	The cloudiness is due to Earthy phosphates (Phosphaturia), or to pus corpuscles (Pyuria). Add gradually one or two drops of acetic acid.	The cloudiness is due to increased mucus secretion or to Bacteria.
	The cloudiness disappears.	The cloudiness remains.
	Phosphaturia.	Pyuria.

If the pus forms, after the urine has settled, a microscopic yellow white deposit in the bottom of the test-tube, then one can carefully

decant the liquid and add to the sediment remaining a concentrated solution of caustic potash (1-3 of water) and shake the mixture so long till a change is perceptible. If the sediment consists of pus, and if this pus (for example in pyelitis with an acid urine) is in a fine flake-like condition, the whole mass will appear, on the addition of the potash, transparent and of a thick brine-like consistency. This change in the consistency of the pus sediment takes place for the reason that the albuminates of the pus, by this test, are changed into a tenacious *alkaline* albuminate. If the white powder-like sediment, on the other hand, is made up of earthy phosphates, there will be no change on the addition of either the caustic potash or the caustic soda solution, but the sediment will retain its fluid consistency, that is fluid enough so that it can be poured off in drops. The changing of the pus into a tenacious mass takes place, at times, in the bladder itself—for instance, in a purulent catarrh of the bladder, with ammoniated fermented urine; this, of course, is due to the carbonate of ammonia present. The greenish, yellowish, tenacious, glass-clinging, mucus-like mass is not made up from the mucus from the bladder, but from alkaline pus. If retention exists at the same time with pyuria and an ammoniated fermented condition of the urine, the *urine*, on account of the large amount of pus present, will be gradually changed into a similar honey-like, transparent mass, which, by the use of the catheter, flows away very slowly, and by cooling takes on a syrup-like consistence. By microscopical investigation of this urine, one is no longer able to discern the contours of the pus corpuscles with positiveness, but finds oftener the free nuclei of the same. If ulcerative processes are present in the urinary apparatus, together with pyuria (for example, an ulcerated neoplasma of the bladder), the purulent secretion will take place on an unhealthy icorous form. The urine has at the same time a dirty, greenish-brown color, and a penetrating, stifling, disagreeable odor, which reminds one sometimes of the smell of feces, and sometimes of sulphate of ammonia. Under these circumstances the reaction of the urine is alkaline. This is the kind of urine which blackens silver instruments when they are used to empty the bladder. Such a urine contains a great quantity of albumen and also much blood-coloring matter, but in the urinary sediment there are neither pus nor blood cells, in fact, no epithelial forms whatever, all the cells having degenerated, so that one finds,

microscopically, only more or less detritus, triple phosphate crystals and bacteria in large quantities. The penetrating smell which is present with such urine, and which, on the addition of a mineral acid, becomes much intensified, in fact, unbearable, may be due to the fact that a part of the albuminatis have decomposed in the bladder, or it may be due to the ulcerative process in the bladder itself. In parenchymatous cystitis, especially, it is possible for a diffusion of intestinal gases to take place in the bladder. This diffusion of gases is similar to that observed in inflammations and abscesses around and in the neighborhood of the intestines, viz: in abscesses by perityphlitis, in cases of incarcerated herniæ, etc. The pus which is discharged with the urine in pyuria can spring from one or two sources: it can either be formed on the superficial mucous membrane of the urinary tract, or it may arise from the parenchyma of one part only of the tract, or from a veritable abscess. It can come also from the purulent exudations and abscesses which were situated, originally, in proximity to some part of the urinary tract, and afterwards perforated the same. Abscesses of the kidney, of the prostate, exudations by purulent parametritis and by perieystitis, etc., empty very often into the bladder, and make up the major part of the purulent sediment in the urine. The *varying* amount of pus discharged with the urine, at one time large, at another small, leads one immediately to suspect the existence of an abscess, the pus from which is being discharged into the urinary tract. Certainty is only arrived at by the microscopical investigation of the urinary sediment. If the pus comes from a mucous surface, one will find, microscopically, besides a large number of pus corpuscles, only the epithelia of the inflamed mucous surface. If the pus, though, comes from some abscess cavity which has emptied itself into the urinary tract, then it is very rare for the granular cells or the so-called inflammatory corpuscles to be absent, and when present they are easily recognized.

The pus corpuscles, as seen under the microscope, appear sometimes in a solitary, cellular form, sometimes, however, conglomerated, hanging together, and making up variously formed masses. As conglomerated masses, they originate very often from the small exit passages of the accessory glands of the urinary apparatus, or from the papillary portion of the kidney itself; in the latter case they have a cylindrical form. From this conglomerated mass one

can determine the source of the pus by observing the epithelial forms imbedded within—for instance, kidney epithelia, spermatozoæ, etc.

Pus which is discharged with urine can come from different portions of the urinary apparatus, and one can determine the portion from which it comes by the appearance and condition of the urine, and also by microscopical and chemical examination. Whether it is—

(1) Pus from urethra as far as the *musculus compressor urethræ*.

(2) Pus from the neck of the bladder or from the *pars prostatica urethræ*.

(3) Pus from the bladder, or

(4) Pus from the pelvis of the kidney and from the kidney itself.

(1) The purulent secretion or suppuration of the urethra as far *musculus compressor urethræ*.

URETHRITIS.—The characteristic of this form of suppuration is, that the purulent catarrhal secretion is not only forced out of the urethra together with the urine, but also flows out spontaneously in the intervals between the acts of micturition, and, according to the intensity of the trouble, staining the linen to a more or less extent. The suppuration in the urethra as far as the *musculus compressor urethræ* does not cause a constant desire to urinate. The patients pass their water the normal number of times, and experience only, especially in the acute cases, a rather severe burning sensation during the passage of the urine through the urethra. In *acute* cases of urethritis the meatus is usually swollen and reddened; but in chronic inflammation, on the other hand, this is seldom the case. As long as the purulent secretion from the urethra is profuse, the pus is discharged in a drop-like form, but if the secretion is very slight, as in chronic urethritis, one will usually be unable to detect it by external examination. In such cases, in order to see the secretion at all, one must, as it were, milk the penis, and in that way force the pus out. In very many cases a drop or two may be brought to view by this method, but if the secretion is very thick and tenacious, and if it clings firmly, as a light covering to the diseased part of the urethra, then we cannot, even with pressure, force the secretion out of the urethra, in order to see it. In such cases nothing remains but to make the patient urinate. The stream (where there is much

urine collected in the bladder), being forced out with considerable power, will tear away, by the friction against the walls of the urethra, the purulent secretion (the deposit) from the diseased portion, and force it out. At the same time this membranous deposit will be rolled into a sort of thread by the out-pouring urine, and is in this form eliminated. That this secretion does *not* possess this thread-like form while lying in the urethra, is shown by endoscopic examination of the canal which shows the deposit clinging to the diseased part, but never loose and in string-form. These thread-like masses are constantly found in the urine of one suffering from chronic urethritis. These masses are differentiated from semen and from mucus particles (which, likewise, will not seldom be found in urine), by appearing much more compact, and, on account of their specific weight, sinking quickly to the bottom of the vessel containing the liquid, while the slime and the semen constituents swim around for a long time in the urine as a light transparent cloud, first remaining more on the upper surface of the fluid, and *sometime* afterward sinking to the bottom. If one takes such a formation up with a fine forceps and places it under the microscope, he can always determine whether it consists of slime, of semen or of a purulent secretion. In no other way than by the microscope can the quality of these little clouds or threads be determined. One can only say that the secretion which swims around in the urine in the form of compact threads, is *very likely* a purulent one. Formerly it was believed that the pus threads, as such, were situated in the urethra itself, and from the very forms of the same, as well as from their length and thickness, conclusions were formed, namely, the diseased portion was thought to be determined. If the threads were short and with a regular thread-like form, it was thought that they exhibited the casts of a glandular outlet; if they were long, thick and cylindrical, it was said that they sprung from, and rested in, the lumen of the urethra itself; and if the threads were more lumpy, or ragged, or had a fringe-like appendix, then they must come from the *pars prostatica*.

Now, that we know that the thread-like form is due to the action of the urine, these arguments, of course, fall to pieces. One can only say that larger and thicker threads come from a larger diseased spot, and that the shorter and thinner ones come from a smaller diseased surface of the urethra! mucous membrane. Still farther we

may go, and say that the thread-like thin "pus threads" come mostly from the fore-part of the urethra as far as the *musculus compressor urethræ*, and that the broad, lumpy and ragged-formed ones come more frequently from the posterior part, from the *pars prostatica*. This, though, is also not to be depended on. Only when we find spermatozoæ by microscopical investigation at the same time with the pus corpuscles imbedded in the mass, can we, with the nearest approach to certainty, say that this comes from the posterior portion of the urethra.

One of these "pus threads," as seen under the microscope, consists of a translucent cylindrical-formed mass, in which very large numbers of pus corpuscles and a few urethral epithelia appear imbedded. The more compact such a thread appears, the more pus corpuscles it contains; if, on the contrary, the "thread" is delicate and transparent, it consists, for the most part, of urethral epithelia, while the pus corpuscles are present only in a slight degree. The more the epithelia predominate in such a mass, the more advanced is the process of healing. The examination of the "pus thread," then, with the microscope, has also a signification in this respect. Suppuration taking place in the urethra, as far as the *musculus compressor*, is again characterized in this way: when the patient urinates into two glasses in such a manner that the first half of the urine will be received into the first glass and the second into the second glass, the urine in the first glass will appear cloudy, while that in the second glass will be found bright and clear. In the beginning of urination the urethra will be filled from its secretion, and washed out by the rushing urine, therefore it is that the secretion is only present in the urine first passed.

As has been already said, one finds this form of pyuria in the different forms of urethritis. The slight form of urethritis is represented in urethritis catarrhalis, the severe form again in the urethritis gonorrhoeica. It is not our intention, in this concise description of the forms of pyuria, to at the same time take up gonorrhœa in detail. We shall refer only to such particulars in regard to the recognition and treatment of chronic urethral affections (without the endoscope) as appears absolutely necessary.

Urethritis catarrhalis is an affection of the urethra which, for the most part, runs its course in the more superficial layers of the mucous membrane of the urethra. The causes of this inflammation

are various, being at one time traumatism, at another chemical agents, and sometimes discratic general disease. Under the head of traumatism ranks onanism, the forcible introduction of instruments into the urethra (catheterismus), etc., while chemically inflammations are produced by the inappropriate application of remedies within the urethra, by the patient having had intercourse with an unclean woman, which woman may not be affected with gonorrhœa.

With regard to the catarrhal urethritis dependings on a certain discrasia, we must here mention those discharges which are observed at times in syphilis and in tuberculosis, and which resist all therapeutic remedies as long as the general affection prevails. Very often the particular affection is combined with gonorrhœal affection, and then the course run in such form of disease is a very chronic one, and most obstinate with respect to therapeutics. It only yields and gets well after the general disease is treated.

The urethritis from traumatism occasioned by the catheter, or from careless intra-urethral local treatment, or from coitus with an unclean person, usually lasts only a short time, disappearing often within a few days, if aggravating influences are removed. But the urethritis which is brought about by a long-continued onanism does not end so quickly. In this case it becomes necessary to resort to both energetic local and instrumental therapeutics.

The secretion in catarrhal urethritis is not purely purulent, being more white or greyish, and leaves on the linen a somewhat dark-edged stain, with a central yellow spot. We find, of course, by the microscope, many pus cells, still, at the same time, there are to be seen a larger number of epithelial cells from the urethra. We find this catarrhal form of urethritis very often in ten and twelve year old boys, if they are addicted to the terrible habit of onanism.

Gonorrhœal urethritis is quite another thing. Compared with the catarrhal form, it is always a severe affection, the normal source of which being much longer, and even in acute cases coming to an end very seldom before the end of the fourth or sixth week. This form of inflammation seldom limits itself to the most superficial layers of the mucous membrane of the urethra. The inflammatory process penetrates the deep parts and produces in the sub-mucous parts of the urethra a widespread and chronic inflammation.

We find very often single portions of the diseased tube infiltrated throughout its entire thickness, so that such an infiltration can even be appreciated by the finger of the examiner. But it is not only

the walls of the tube that are seized by the inflammatory process ; in a few cases there are formed also large periurethral infiltration, which is not only appreciable to the touch, but also to the eye, as an intumescence, and which not seldom degenerates into an abscess, which perforates the *skin* of the penis and allows the pus to discharge externally.

From this delineation it is made clear that the gonorrhœal inflammation of the urethra is capable of piercing to the deeper layers of the walls of the urethra, and that the same, by a chronic course, can bring about various changes in the urethra itself. The superficial changes produced by the gonorrhœal process have been made by means of the endoscope, accessible to the eye, and the deeper changes exhibit themselves through metamorphosis of the parts surrounding the urethra, at times corresponding to the whole thickness of the same. The urethral walls become indurated, and since their elasticity has been lost, they become more fixed and rigid, with a slight diminution in the calibre of the canal. Otis, of New York, first called attention to these changes in the urethra after gonorrhœa, and described the same as "strictures of large calibre."

The microscopical examination of a healed urethra after chronic gonorrhœa, shows usually two intrinsic changes, which are readily appreciated by the eye. The one change concerns the epithelia, the other the sub-mucous and the connective tissue proper of the urethra. The epithelium appears not seldom in isolated portions in slight layers, as it were lying upon one another, and presents the picture which is called epithelial deposit of the mucous membrane of the urethra. The sub-mucous connective tissue, though, appears much more dense and thicker, and forms a stratum in isolated portions which occupies the whole thickness of the urethra.

This microscopical "find" is sufficient to show that the gonorrhœal process, as compared with the catarrhal urethritis, is very prone to take hold of the deeper layers of the urethra, and then to produce those changes which are apt to follow from gonorrhœa, and which have been called *strictures*.

Acute gonorrhœa begins at the opening of the urethra, where the infection is always received, and extends gradually towards the back or posterior portion. In a normal case the inflammatory process comes to an end about the fourth or sixth week, and reaches no farther than the *musculus compressor urethræ*, and in proportion as the gonorrhœa concentrates itself posteriorly, the fore, and

formerly inflamed, parts gradually become paler. If the gonorrhœa overstrides the boundary line formed by the *musculus compressor urethræ*, then the course becomes an abnormal one, which is often complicated by prostatitis, cystitis, epididymitis, etc., which, of course, essentially prolongs the gonorrhœal inflammation. Although gonorrhœa will affect all portions of the mucous membrane of the urethra, it seems to choose oftener one or two particular parts, which must be designated as its *favorite* seats. These favorite seats are the physiological expansions of the urethra, viz: the *fossa navicularis* and the bulb. In these two portions, therefore, we find the resulting effects of chronic gonorrhœa oftener more fully pronounced—for instance, the narrowing. Suppuration in the fore-part of the urethra is characterized, then, in that when the *urine* is passed in two portions, only the first half will appear cloudy on account of flakes or threads, while the second half appears light and clear; and farther, that as, in front of the *musculus compressor urethræ*, no other sphincter exists, the secretion will also flow spontaneously from the urethra between the urinations, or at least appear at the meatus, and will stain the linen in a greater or less degree.

(To be Continued.)

PROF. HENRY F. CAMPBELL, M.D.—We are greatly gratified to learn from the *Maryland Medical Journal* (November 1) of the successful double cataract operation upon the distinguished President of the American Medical Association. "At the last meeting of the American Medical Association, in May last, his blindness was so far advanced that he got about with much difficulty. In September Dr. Campbell went to Baltimore, where Dr. Chisolm performed cataract extraction, under chloroform. The treatment was painless throughout, convalescence seemingly commencing with the operation itself. * * * In three weeks from the operation Dr. Campbell was able to go to New York to attend a meeting of the Medical Council having in charge preparations for the next meeting of the International Medical Congress. We have since learned that he resumed his professional work with pristine vigor." This, with the establishment of the line of political demarcation which was made in this State on the 4th November, is good enough news for one number of the JOURNAL.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE NORTH CAROLINA BOARD OF HEALTH—THE CAPE FEAR QUARANTINE.

It is again opportune for the people of this State to look to the interests of public health. It is opportune because our people have shaken off the lethargy which oppressed them in regard to their industrial condition, and because they have shown at the polls in the late election a revival of interest in their political condition. Furthermore, that most cogent of all arguments is just now assuming large proportions, namely, the argument of an approaching epidemic, and it will probably do more for the cause of public health than the calmer arguments of every day necessity for attention to hygienics.

It seems, in view of all the circumstances, highly probable that we

will get some valuable additions and amendments to the law creating the Board of Health, as well as that of the Board of Examiners. A new Legislature has been elected, and we note among the number some of the most distinguished names in the State, and not a few of them physicians who have earnestly desired, and worked for, these very amendments.

All of the forms of pestilence which have heretofore visited the State, except cholera, were brought in through the seaport towns—Wilmington and Newbern—and no precaution, therefore, seemed to be necessary than making a quarantine for these ports. The outlook, though, now is very different. Cholera has made its way as far West as Paris, with every probability of reaching this country next year. This disease is quite as likely to follow the lines of railroad as of ocean travel, and heretofore in the history of the visitation of cholera in this State (about 1834) it was far more prevalent in the interior towns than in the seaports. The situation is, therefore, one which is of universal interest, and will be the strongest argument by which to excite the attention of the Legislature. It would be useless to depend upon the State Board of Health in its present condition, but it would be a proper recognition on the part of the Legislature to vitalize the old law, and supply the present Board with all the necessary means to perform its proper functions. What has already been done in the State, save the \$200 annually doled out, fell to the personal charge of one member of the Board, a condition of things very discreditable to the State. This being the time when there is some promise of success, we would renew the suggestions made by us two years ago, viz: Merge the State Board of Health into the Board of Charities and Correction, as provided for in the Constitution, and thereby fulfil a law which has been dead on the statute-books. This would give the whole matter a *raison d'être* with such a color of right to exist as could be approved of by some very honest persons who could not find anything to commend itself to them in the State Board of Health.

We are sure that we are not at all visionary in this belief in the good-will of the incoming Legislature, as we have been assured by several very earnest letters on the subject from gentlemen who will take their seats as members, that they think our suggestions in the editorial in the last JOURNAL struck the key-note. It is only necessary for those gentlemen entrusted with the matter to present it fairly to the proper committees of the Legislature.

Furthermore, we would add that the last Legislature allowed the Wilmington Quarantine Station to go entirely unprovided for. The hospital was destroyed by fire three years ago, and since then there has been no provision whatever for the care of the sick. The station is very deficient in provisions for cleaning and disinfecting vessels, causing a loss of thousands of dollars to this port by the rule of non-intercourse with certain foreign countries now a necessity of the situation, and by requiring vessels to load and unload at the station twenty miles below Wilmington. An appropriation is absolutely necessary to cover these demands, and we ask that it be provided. The interests of the State Board of Health extends to all these matters, as well as to railroad quarantine, and in order to make it efficient it should be organized and under a proper head. All these matters will be presented to the Legislature, and we predict a favorable action.

SOUTHERN MEDICAL JOURNALS AND MEDICAL JOURNALISM.

THE TEXAS COURIER OF MEDICINE has still further improved its appearance by a more perfect typographic execution and an attractive cover. The rapid growth of this Journal has been phenomenal, and we wish for it all the success it is striving for. Dr. Daniel, the senior editor, has done, and still continues to do, a noble work for his State in striving to perfect the laws for the regulation of the practice. The influence of the *Texas Courier-Record*, we are glad to see, is widely increasing, and as the energy and vivacity of its editors seems to be unbounded, a still more brilliant future is in store.

THE ATLANTA MEDICAL AND SURGICAL JOURNAL, under its present management, is a very handsome periodical. Its mechanical execution is excellent, and the editorial conduct of the Journal is good, and steadily improving. Its pages have been adorned in the last few months with excellent engravings of some of the more prominent Georgians, among others we notice that of Dr. Henry F. Campbell and Dr. Robert Battey.

THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL is the oldest

of the Southern medical journals, and it has always maintained a high degree of literary excellence. It is now conducted under a new business and editorial management, but there has been no interruption in the steady onflow of good scientific work, while its exterior has been perceptibly brightened by a clear and readable typography.

We are gratified to see all this manifestation of literary activity among the medical men of the South, and hope that the time is not far distant when the eminent writers of our section will take enough pride in the creation of a Southern medical literature to give their best contributions to Southern journals. This of course would be a serious self-denial, because some of the journals of the Northern cities have a larger circulation, and are able to pay well for contributions—two temptations which are hard to overcome. Certainly the larger part of the able medical men in the South are neglecting literary work, and unless they amend their ways in this particular, they will not make the record for science which the past generation achieved in so conspicuous a manner.

The Medical Journals of the South have struggled forward under a peculiarly heavy burden for all these years since the war, and success has only crowned the efforts of those which have been pushed arduously by their editors. Debt and disappointment have not been successful barriers, for had they been the only remaining record of their existence would be found in the Index-Catalogue of the Library of the Surgeon General's Office, and some unpaid promissory notes of their creditors.

We are, therefore, especially proud to chronicle the manifestations of a growing medical literature, and believe that at some day, not too far in the future, we hope, it will be especially rich in the record of researches into the diseases peculiar to our climate, while it comprehends the whole range of catholic science.

QUEBRACHO IN THE DYSPNŒA OF LARYNGEAL DIPHTHERIA.

A recent gratifying result of the use of quebracho to relieve suffocation in laryngeal diphtheria is worthy of note. A child, eight years of age, in the tenth day of the disease, had urgent

orthopnea, which was so violent that tracheotomy was thought of. Quebracho was ordered in ten-drop doses, to be repeated every half hour until relief came. Unexpectedly vomiting ensued, large shreds of grey and gelatinous sputa stained with blood were expelled, and breathing became free and natural, and the patient slept. The heart's force was rather made stronger by the medicine. Two similar attacks were promptly relieved by the quebracho, in each case vomiting following its administration. This seems to be the agent we have been looking for in such cases, more particularly as it sustains the heart.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON DISEASE IN CHILDREN. By EUSTACE SMITH, M.D. 8vo. Pp. 144. Price \$5.00. Wm. Wood & Co. 56 & 58 La Fayette Place, New York, 1884.

Medical literature is rich in treatises on practice of medicine among children. England has given us the classic works of Dr. Charles West, and more recently a volume on the same subject by Dr. Wm. H. Day. In examining this new competitor for the favor of the profession, we necessarily recall not only what England has done in this field of medicine, but we must compare the works of Meigs & Pepper and J. Lewis Smith, in our own country, and the ancient standards which France has given us in the extensive works of Barthez and Rilliet. It is a matter of no little interest to observe that the treatises so far given to us on diseases of children, with few exceptions, have emanated from writers of the highest professional attainments, skilled both in the art of correct observation and in grace of style and diction. These merits signalize the volume before us. The author evidently writes from a fund of personal experience, and is very practical.

We notice by the preface that the author consented to write this volume for the publishers, and therefore this American edition is the first appearance of the work.

The noticeable feature about this and other English works is the amount of attention paid to diathetic diseases, and especially such general diseases as rickets. These chapters are especially instructive, because it is to such standard authors that we must go for a description of the latter disease, so rare is it even among the Southern negroes.

The chapters on such important topics as *Diphtheria* are written in a masterly manner. Those familiar with this disease cannot fail to be pleased with the graphic description they find here. It is evidently from the pen of one ripe in clinical experience. Under the head of *prognosis* in diphtheria, the author, speaking of the invasion of the trachea by the disease, remarks that the danger is very serious, but if tracheotomy be performed in time, and a marked retraction of the chest-wall indicates that the smaller tubes are free below the point of obstruction, and that air, if admitted, will be able to penetrate to the alveoli, recovery is far from impossible. After the operation, success depends chiefly upon the child's capability of taking and digesting his food, and upon the lungs remaining free from pneumonia. If there is no difficulty in administering nourishment, the child can be still fed through the stomach-tube; but the loss of appetite usually implies feeble digestive power, and the prospect is not favorable. If pneumonia occur, the prognosis is gloomy."

We believe that the above is about as strongly as tracheotomy in this disease should be advocated. In private practice it is almost out of the question to get permission to perform tracheotomy until all the conditions above stated have ceased to hold out a hope. The author goes on to say: "The success which often attends the operation of tracheotomy in membranous croup is very encouraging, and even in the case of an infant we should not hesitate to have recourse to it. Even at a later stage, when the child seems to be at the last gasp, the operation should be undertaken, for nothing short of actual death can render it hopeless. This opinion, coming from one of large experience, is full of encouragement, but it does not accord with the experience of physicians of large practice in this country.

"When a thrombus forms in the heart and gives rise (the text misprints the word *ries*) to serious dyspnœa, the child should be kept *lying down*." The advice should be, that in all cases of grave diphtheria the child should not be allowed to lift its head to be fed,

to spit, or to attend to any of the necessities of nature. The rule should be, that as long as the pulse exceeds one hundred, with an unsteady rythm, heart-failure is imminent when the erect position is suddenly taken. We have found the safe time in such cases to be not earlier than the fourth week. Valuable lives are lost after convalescence has been supposed to be established by allowing the patient to sit on the *pot* to relieve the bowels, or to sit up for the purpose of making up the bed. The management of convalescence is the most difficult part of the treatment in diphtheria, and is not sufficiently dwelt upon by the author.

Turning to the chapter on *Ague*—the only allusion to malarial fevers—we find that the subject occupies only five pages, and especially as to treatment, it could very well have been omitted. The therapeutical resources for making quinine palatable to children are very slim, consisting of glycerine and milk. The American elegancies such as the elixir of yerba santa, the elixir of coffee, the elixir of licorice, glycyrrhizin, Daniel's device of sandwiching it between layers of egg-albumen; and for the administration by the rectum, nicely made gelatine capsules, are all omitted. Nothing is said of the method of inunction with the oleate of quinine, a plan shown to yield adequate cinchonism in malarial eclampsia. The dosage suggested strikes one familiar with the daily use of quinine, as possibly a misprint. The author says: "A child of twelve months old will take a grain and a half of sulphate of quinine three times a day! In his direction for the hypodermic use of the drug he suggests the "neutral sulphate freshly dissolved in warm water," and injected warm. "For an adult the dose is half a grain. Probably one-sixth of a grain would be a suitable quantity for a child of two or three years old"!

But these are the only weak points in the book, and we have selected them because to the Southern doctor this is only second in importance to the diseases of the stomach and bowels, and because the volume was written for the American profession.

Dr. Smith is well and favorably known by his work on the "*Wasting Diseases of Children*," and the present volume fully sustains the reputation he won by that useful treatise. We do not hesitate to recommend this work as among the best yet offered to the profession. The publishers have executed their share of the production of the volume in a very satisfactory manner.

LECTURES ON THE PRINCIPLES OF SURGERY DELIVERED AT THE BELLEVUE HOSPITAL MEDICAL COLLEGE. By WM. H. VANBUREN, M.D., LL.D. Edited by LEWIS A. STIMSON, M.D. New York: D. Appleton & Co., 1, 3 & 5 Bond Street. 1884. Pp. 588.

"As a tribute to Dr. VanBuren's memory, and also as a service especially to those who have received their surgical education from him," this book will be well received; but we believe, as in the case of the posthumous publication of the lectures of Sir James Y. Simpson, the friends and admirers of Prof. VanBuren would not willingly let his reputation rest alone upon this work.

If we are to judge by the interesting style by the mere reading of these lectures, how greatly they must have been appreciated by those who heard them from the teacher. There is nothing dry or prosy in them. The illustrations of principles are drawn from the clinical material of the teacher, and are always fresh and *a propos*. Past and present theories are compared in such a way as to give the student an interest in the work of older pathologists, and to point out progress made, without wearying him with a dry narration at a time when he is not able to comprehend the underlying philosophy. As in the treatment of the subject of *Hæmorrhage*, the use of the Ligature is described, inculcating the theory and practice, and at the same time carrying along the narrative of its employment from the days of Paré—the days of the hempen, the silken, the metallic, and finally the catgut, ligature—to the days of Lister. *En passant*, too, we note that Dr. VanBuren, in 1848, performed an ovariectomy, in which he used "the finest floss-silk, and cut off both ends, closing the abdominal wounds entirely. The case did perfectly well, and the ligatures were never heard from." He gives Dr. Marion Sims due credit for having applied and established the use of the silver suture in the operation of vesico-vaginal fistula.

The chapter on *Fracture* is not up to the latest published lectures of the author, and in one particular, which we notice (p. 475) on the application of weight-and-pulley extension, an error remains in this text which he had carefully corrected subsequently. Dr. Buck is credited with the introduction of the above-named appliance; but in a lecture printed in the *New York Medical Record* in 1878, Dr. VanBuren gave the credit to Dr. Daniell, his attention having been called to Daniell's priority, as far as America is concerned, by this JOURNAL.

Dr. VanBuren's popularity as a teacher can be easily understood from a study of this volume. His manner is vivacious, his matter select, and his fulness of knowledge easily discernible. He writes like one in authority, full of enthusiasm and possessed of the skill of imparting to students just that sort of knowledge best suited to their future intellectual growth.

The work is handsomely printed, with full-faced clear type and leaded lines, and is in every way a credit to the publishers.

THE ELEMENTS OF PATHOLOGY. By EDWARD RINDFLEISCH, M.D. Translated from the first German edition by WM. H. MERCUR, M.D. Revised by JAMES TYSON, M.D. Philadelphia: P. Blakiston, Son & Co., No. 1012 Walnut Street. 1884. Price \$2.

This is a small volume of 263 pages, by one of the most eminent German professors, whose writings are well known on this side of the Atlantic, and it is upon the general elements of pathology. The whole tenor of the work is that of a practical man writing for instruction. There is no waste of words over theories, and no wrangling. Whether we owe the highly practical tone of the volume to the translator and editor we cannot say, but it is evident everywhere.

We would like to notice before parting with this instructive little volume the author's observations on *Disturbances in the Heat-Regulating Apparatus*. He takes exception to Liebermeister's explanation that "there exists in every fever a standard of heat-regulation higher than the normal mechanism, regulating the production as well as the escape of heat." He says:

"To accept heat-regulation as a changing apparatus possesses such a fascination for the spirit of the nineteenth century that it is with reluctance that he advances contrary views. He believes in the physiological basis, but does not think that such a clever hypothesis can be maintained. When the temperature of our blood begins to rise as the result of external heat, we endeavor, by discarding our extra clothing, to reduce our temperature to normal again. But is it really the perception of increasing bodily heat that makes us do this? Is it not rather the sensation of an insufficient escape of heat, the feeling that we cannot get rid of our warmth, that our skin is over-heated? On the other hand, when a sudden fall of our external temperature causes us to button up our coats and draw on our gloves, everyone feels, undoubtedly, that it is done in order to prevent too great escape of warmth. The

"perception of an increased or diminished escape of warmth" incites the heat-regulating apparatus to a corresponding activity. Our own arbitrary standard concerning the heat-regulating apparatus is fixed by the rapidity with which our body is cooled off externally—best seen in the sudden effect of warm or cold, local or general baths. This arrangement has more than one disadvantage. It would certainly have been much better for a frozen finger or toe, had its blood-vessels dilated and allowed warm blood to flow, instead of remaining contracted. But the rules of this regulating apparatus are such that when a powerful external escape of heat begins the capillaries contract, while they open, on the other hand, when there is little or no escape. * * * Whatever may be the thermal effect of a chill, there is no doubt that it preserves warmth, and that the previous temperature of the blood is increased. But since in fever the loss of heat, in spite of the preservation of warmth, is greater than in health, the preservation of heat by a chill cannot be regarded as a sole cause of fever, but only as a secondary factor of the same."

He considers a chill as nothing more than an erroneous interpretation of the unquestionably increased escape through skin of bodily heat, augmented by the high temperature of the blood of the fever patient.

DRUGS AND MEDICINES OF NORTH AMERICA. J. U. & C. G. Lloyd.
No. 3.

This number contains the description of the *Ranunculaceæ*. The chemistry, pharmacy and therapeutics of *Ranunculus bulbosus* is completed. During the progress of the study of *anemonin* in the laboratory of the authors, an explosion took place which brought their present investigations to an end, but they have secured competent assistance with a view to its completion.

Caltha palustris (Marsh Marigold) is next described and illustrated by a wood-cut.

Hydrastis canadensis (Golden Seal) receives the largest share of attention. It is very effectively portrayed in a full-page cut (Plate VIII), and in smaller cut, showing the fruit, dried root and microscopic structure of the root (Plate X and XI). A map is given showing the distribution of *Hydrastis*.

We are glad to see that the authors have accorded to *Rafinesque* the honor which is due to him for the discovery of *hydrastin*, showing also the priority of this name over the word *berberine*, which has since been applied to the same substance. *Rafinesque* knew something

about every department of natural history; he wrote pamphlets on nearly every subject, and to-day, unreliable and eccentric as he has always been considered, a full set of Rafinesquana would bring a sum which would contradict all that has been said about his inaccuracy.

But to return to our authors, we must add that they are not only giving us good botanical material, but they are rescuing the fast disappearing fragments of the works of our earlier scientific men from oblivion, and as this consisted chiefly in botany—and particularly medical botany, the Messrs. Lloyd are earning substantial reputation as historians of the infancy of American science.

BACTERIA. By Dr. ANTOINE MAGNIN and GEORGE M. STERNBERG, M.D., F.R.M.S. New York: William Wood & Co. 1884. Pp. 494.

Dr. Sternberg, so widely known for the pre-eminent work he has done in the investigation of bacteria in New Orleans, under the auspices of the National Board of Health, has done the profession a good service in placing this volume within the reach of all. At the time he began his studies in the laboratory in New Orleans (which, by the way, was provided with the most approved outfit), there was hardly a guide worth the name to the pursuit of the immense details of his work. There was a little here and there scattered through foreign monographs, but the mass of knowledge now brought together as in this volume, was unknown as a whole. Finding Dr. Magnin's work of so much assistance in his preliminary studies, in 1880 Dr. Sternberg made a translation of it, and subsequently (1883) added several chapters on "Bacteria in Surgical Lesions," bringing the volume up to that date. This was an important part of the work and fully justifies the appearance of his name upon the title page as one of the authors. A reading of the prefaces by the author and translator will give one a full and candid statement of the present state of knowledge of the subject of bacteria, and might convince some who talk and write so flippantly on the subject, of a little modesty.

The mechanical execution of the volume is very attractive. The type is large and clear and the lines are leaded; the illustrations are heliotype reproductions of micro-photographs, which, as Dr. Sternberg says, "they will perhaps be less satisfactory than lithographs or wood-cuts to those not accustomed to similar views under the

microscope, and to those critics who are not familiar with the technical difficulties an attempt to photograph the minute organisms here represented. If the clean field and sharply-drawn outlines which it is so easy to draw upon wood or stone makes a prettier picture, and one which may be preferred by some, there can be no doubt that these views from nature, if closely studied, are more instructive than drawings, notwithstanding the inevitable defects arising from the presence in the field of view of extraneous objects, and from the impossibility of having every part of the field in the best possible focus at the same time in these photo-micrographs, which are made with objectives of high power having an extremely limited focus."

The work treats of the morphology and physiology of bacteria; the technology of "culture," including the staining, photographing collection and general management in the laboratory. The various germicides and antiseptics are then considered; the appearance of bacteria in infectious diseases; bacteria surgical lesion and a bibliography extending over thirty pages.

For the student, here is a book which will save him an immense amount of disappointing attempts, and place him at once *en rapport* with this difficult department of science.

LEGISLATION ON INSANITY. INTELLIGENT PHILANTHROPY. A Collection of all the Lunacy Laws of the States and Territories of the United States. To the year 1883, inclusive. Also the Laws of England on Insanity, Legislation in Canada on Private Houses, and Important Portions of the Lunacy Laws of Germany, France, etc. By GEORGE L. HARRISON, LL.D. Philadelphia. 1884.

This volume represents the philanthropic purpose of its author and compiler, to promote more humane legislation in regard to the unfortunate insane. It is a stout octavo, bound in law calf, of more than 1,100 pages, bringing together in alphabetical order all the laws now in force in the most civilized nations, presenting in compact form, for easy comparison, the products of the different legislative bodies, thus enabling the law-makers to review the condition of their own State laws. Mr. Harrison was for many years a member of the Pennsylvania Board of Public Charities, a part of time its President, and had unusual opportunities to become familiar

with the condition of the inmates of Insane Asylums. He did not confine himself to his own State or to this country, but had "favorable opportunities in Great Britain and on the Continent of Europe, to indulge the interest which he felt in the subject, and to study it further by a comparison of the several methods of administering these various charities." Based upon this experience he has prepared this great volume for *gratuitous distribution*, in order to induce Legislatures to discard mischievous and worthless laws and enact others more consonant with the spirit and intelligence of the hour. "My present purpose," he says, "is to effect this merciful policy with the Legislatures of the States and Territories of the United States, and I trust that the simple method I suggest, with the means to accomplish it, gratuitously furnished, will be willingly adopted. The beneficial results will soon appear to the quick relief of the helpless, and the ultimate satisfaction of all who have the care of them."

The author's preface gives several illustrations, coming under his own observation, of distressing injustice to persons committed as insane, cases, as he remarks, which "could not have occurred under a more enlightened system of legislation, and a more just and generous appreciation of the question by hospital managers or superintendents."

An examination of this volume will be of immense advantage to the incoming Legislature, especially that portion of it entrusted with the inspection of, and legislation for, the State insane establishments.

Dr. Harrison has our thanks, and he will doubtless get the applause of the few earnest and devoted men who in various spheres have the welfare of the insane at heart. Our copy of the work is at the service of any legislator who deems it of enough importance to borrow it to read.

MEDICAL RHYMES. A Collection of Rhymes of Ye Ancient Times, an Rhymes of the Modern Day, Rhymes Grave and Rhymes Mirthful, Rhymes Anatomical, Therapeutical and Surgical, all Sorts of Rhymes to Interest, Amuse and Edify all Sorts of Followers of Esculapius. By HUGO ERICHSEN, M.D. Introduction by Prof. WILLIS P. KING, M.D. Illustrated. J. H. Chambers & Co., St. Louis, Chicago and Atlanta.

The above partial transcript of title page gives an idea of the

contents of this book. The collection contains some of the best, and perhaps some of the worst, of the verses by and about doctors, and omits a few of the best. It is cleverly illustrated, and well printed. One of the poems is by the editor, Dr. Erichsen. The introduction by Dr. King is not the least poetical part of the volume. The West has the ascendancy just now in the *belles lettres* of medicine.

A TEXT-BOOK OF PATHOLOGICAL ANATOMY AND PATHOGENESIS. By ERNST ZIEGLER, Professor of Pathological Anatomy University of Tübingen. Translated and edited for English Students by DONALD MACALISTER, M.A., M.B.. Part II. Special Pathological Anatomy, Sections I. to VIII. New York: William Wood & Co. 1884.

This second installment of Ziegler's Pathological Anatomy gives the reader a more satisfactory idea of the full scope of the work. The translation is very smooth, and puts a valuable work within the reach of the American physician, nearly as rapidly as it appears in German. It is in the September number of Wood's Library, and when completed will be a thorough text-book of pathology. The illustrations are effective, and the broad-face catch-titles add greatly to the facility of reference.

KÖHLER'S MEDIZINAL-PFLANZE.

The seventh and eighth parts (double number) of this handsome "Atlas" has eight plates of uniform merit, as follows: *Nicotiana rustica*, L. (Turkish, Mexican tobacco); *Quercus sessiliflora*, and *Q. pedunculata*; *Viscum album*, L.; *Cnicus benedictus*, L.; *Viola tricolor*, L.; *Daphne Mezereum*, L.; *Colechicum autumnale*, L.

The European mistletoe—*Viscum album*—as here portrayed, shows at a glance the difference between it and the American mistletoe—*Phoradendron flavescens*. We need add nothing to the praise we bestowed upon the first parts reviewed in the August JOURNAL.

THE THERAPEUTIC GAZETTE.

This JOURNAL, formerly under the editorial management of Dr. William Brodie, is to be conducted in the coming year by Dr. Horatio C. Wood, of Philadelphia, and Dr. Robert Meade Smith, of

the same city. The present editor takes occasion to give a sketch of the life and work of the future editors. The elaborate *prospectus* gives promise of work of great importance in the field of therapeutics—a place that has never been filled in the literature of American medicine. There is no doubt that such a journal will receive a large patronage, for with such able editors the abundant material known to exist in this country ought to enable them to outstrip European journals devoted to this branch of medicine.

THE LOCK-JAW OF INFANTS. (*Trismus Nascentium*) or Nine Day Fits, Crying Spasms, etc. Its History, Cause, Prevention and Cure. By J. F. HARTIGAN, M.D., Washington, D. C. New York: Birmingham & Co., 28 Union Square. Pp. 123. Two Illustrations.

This interesting little work will be read with pleasure and some surprise by those physicians whose practice has been large among the negroes: with pleasure because of the hopeful way in which the author writes of recoveries; but with surprise because since the contribution of Dr. Sims to the pathology of trismus nascentium in 1846, the almost universal hope that he was right has induced Southern physicians habitually to require position on the side for the new-born, and with no considerable degree of success.

Dr. Hartigan upholds in this volume the pathology of this disease as taught in the famous article on the subject by Dr. J. Marion Sims, in 1846. This theory was a good starting point, at least, from which a more hopeful plan of treatment might proceed, and was a departure of great importance for that reason, if not for its soundness.

Trismus nascentium, in the hands of Dr. Hartigan, has been amenable to treatment, and all the clinical material he has adduced is truly encouraging to those whose success has not been equal to his. Until the discovery of chloral very few recoveries were known in this part of the country, but our success has been sufficient to remove it entirely from the list of hopeless diseases.

This volume is small, and we advise anyone practising among the negroes to peruse it carefully, not for its novelty—because there is very little that is new in it—but because the whole subject has presented in a digestible shape, with every internal evidence of honest writing.

SURGICAL DELUSIONS AND FOLLIES

Is the title of a handy little bound volume, a revision and elaboration of Dr. J. B. Roberts' address on surgery for 1884 before the Medical Society of Pennsylvania. It has some good things in it, which will serve as hints to young men of limited experience; but it also sets forth an immoderate opposition to chloroform as an anæsthetic, which a large number of surgeons will repudiate as not at all in accordance with their experience. Messrs. P. Blakiston, Son & Co., 1,012 Walnut Street, Philadelphia, are the publishers.

TRANSACTIONS OF THE THIRTY-FIRST AMERICAN MEETING OF THE MEDICAL SOCIETY OF NORTH CAROLINA. Held at Raleigh, May, 1884. Jackson & Bell, Wilmington, N. C. Pp. 132. XXIV.

The Medical Society of North Carolina numbers 348 active, and 6 honorary members. This is the record of their work done for one year—that is, all that is put in print—but is nothing like a fair index of work done. The body of this Society are active, working physicians, full of ardor, firm friends of every measure looking to the advancement of medical progress, but as literary men, too diffident, too little practiced, and consequently less productive than they could easily be.

There is an appendix containing an argument in favor of an amendment to the law of Medical Examinations, copies of which can be had in any quantity on application to the JOURNAL.

We regret the mistake made in the name of our learned and venerable friend, Dr. A. B. Pierce, ex-President of the Society. The writer of this confesses to the fault of having overlooked it in proof-reading. Our friend will readily appreciate the possibility of an error in his well-known name, if he will only consider that proof is read many times in moments snatched from the interrupted course of a busy practice.

G. P. PUTNAM'S SONS will soon publish, by arrangement with the Vienna publisher, a translation prepared by Dr. Barney Sachs, with the authorization of the author of Dr. Mynert's great work, a "Treatise on Psychiatrie." The first part of the work, devoted to the anatomy and physiology of the brain, the publishers hope to have ready by the beginning of the new year. The work will be fully illustrated.

CURRENT LITERATURE.

STATEMENT RELATING TO THE INTERNATIONAL COLLECTIVE INVESTIGATION OF DISEASE, PROPOSED AT THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

The main objects which the Committee seeks to attain through the Collective Investigation of Disease are to widen the basis of medical science, to gather and store the mass of information that at present goes to waste, to verify or correct existing opinions, to discover laws where now only irregularity is perceived, to amplify our knowledge of rare affections, and to ascertain such points as the geographical distribution of diseases and their modifications in different districts. It will be its endeavor to place clearly before the whole profession the limits and defects of existing knowledge, as well as to stimulate observation, and to give it a definite direction. It will be a not unimportant incidental result of its work should it tend, as is hoped, to the better training of the members of the profession in habits of scientific and practical observation, and in systematic methods of recording the facts which they observe.

The age in which we live has seen enormous advances in the sciences on which the fabric of medicine rests, such as Chemistry and other branches of Physics, Physiology and Pathology. Each of these has taken giant strides. It must be admitted, however, that purely medical knowledge has scarcely made proportionate progress. It cannot be expected that it should do so, as it deals with the aberrations of the most complex of organisms, is of all sciences the most difficult, and demands the greatest patience and the largest accumulation of data.

Hitherto the advancement of medical science has been brought about mainly by individual effort. The value of such work in the past we in no way underrate, nor do we desire to lessen the amount of it in the future ; but in medical science there is much that defies interpretation from individual experience, and many problems so far-reaching in an ever-widening field, with elements so manifold, that no single man, however gifted and long-lived, can hope to bring

the whole within its range. The need, therefore, in medicine, of that combination and concentration of individual work which is adopted in many other branches of science and in commerce, and to which increasing facilities of intercommunication have given so much impulse and so much strength, cannot be questioned. Indeed, it may be said that, resting on individual research alone, medical knowledge can be advanced but slowly and with difficulty. Future progress to any great extent must be the work, not of units acting disconnectedly, but of the collected force of many acting as one. For many to act as one, organization is needed ; that organization it is the purpose of our Committee to supply.

Disease is many-sided, and we wish to include in our organization those who see it from every side. All, therefore, whether hospital physicians, family and school attendants, specialists, medical officers of the army and navy, and of workhouses and asylums, will be asked to contribute their quota of observation to the common fund.

In England and in Germany organizations for this purpose already exist, through which good work has been accomplished, and a volume entitled the *Collective Investigation Record*, containing tabulated returns, with reports upon them and other matter, is published annually by the British Medical Association. France and Austria are alive to the importance of the new method. In Scandinavia and in the United States the foundations of associations have been laid. Denmark, Russia and Switzerland are setting their hands to the task. To unite these several associations by an international Congress. Our Committee is enjoined by the Congress at Copenhagen to endeavor to carry out this work, and in compliance with that injunction it invites the coöperation of all who have at heart the promotion of medical science and practice.

The following is the proposed method : A subject having been selected, a person or persons of acknowledged authority will be asked to write a memorandum, in the form of a short essay, upon it. The memorandum will succinctly give the present state of our knowledge. It will also point out the directions in which further research may best be made, and with this view will suggest a few simple and definite questions upon the subject selected. The questions will relate to matters of fact, to be elicited by observation of cases, rather than to matters of opinion.

The contemplated organization will, it is hoped, in time enable

the committee to ask and collect answers to these questions from the profession at large wherever scientific medicine is studied or practiced. It will be a further duty to examine, arrange, tabulate and deduce results from the mass of observations thus collected, due credit being given to each contributor for the information he has furnished, and reports on the results of the several investigations will be laid before the International Congress at its next meeting at Washington.

ISAMBARD OWEN, Secretary General.

5 Hertford Street, Mayfair, London.

—*Boston Medical and Surgical Journal.*

A PLEA FOR THE COUNTRY DOCTOR.

The best elements of our character are always brought out by opposition. Environment determines many points of excellence which cannot be developed by any other means. It applies to the doctor as well as to others of the *genus homo*. The rural practitioner especially is full of controlling surroundings. If he gets the better of them he is so much more of a man. Every one who knows him sympathizes with him in his every-day fight, and credits him with his well-earned successes. The letter in another column refreshes a picture which is full of cold shadows and rugged outline. The central figure is the country doctor and his horse struggling through the deep trough of a muddy road, with a background of bleak hill, and trees bare-poled to meet the whistling wind. No fancy sketch, as he can tell us, but full of reality to thousands of fellow-workers. Hardly appreciated, however, by the metropolitan brother in his cushioned coupé, trundling over Macadamized avenues to sick millionaires.

But after all, taking ordinary chances, we would be inclined to side with the country doctor in any emergency occurring in general practice. A man who can extricate his horse from a snow-drift on a dark road may not be lacking in resources to dislodge an impacted foetal head, cut the bridle of a strangulated hernia, or make a new path for a bean in the trachea. That he is accustomed to shoulder

responsibility hardly tells against him in his general results. His resources widen with his opportunities, and when he makes his own path up the mountain he can the better appreciate the broadened view which he gains. If he has to swim without corks he can float with the more confidence in the deeper waters.

There is more of an education for a doctor than is comprised in the dosage of pills or the action of powders, and the country doctor gets it very often in his daily contact with man and nature. Insensibly he strikes a balance between the capabilities of the one and the power of the other. Matter-of-fact, it is true, but practical always. He may not have time to look after the countless micrococci that fill the scientific air, but he takes care that they do not obscure the view of the end of his road. His destination must be to cure his patient. If he fails, his good friends in and out of the profession will know it. Consequently he must be the general practitioner *par excellence*, as ready to brighten the headlights as to handle the tiller.

The type of the general practitioner is the self-reliant man on the dark country highway, whose every instinct teaches him to keep the road, whether it be going to a patient or at a patient.

It is truthfully said that he cannot call for help always; therefore he helps himself. It is not so much the instrument as the brains behind it. A man of sound practical sense may treat a fractured thigh sometimes better in the backwoods with a forked stick and piece of blanket than can another with an improved "Buck's extension" in a metropolitan hospital. It is the difference in the man wherever he is. The doctor in the country has the best of it because he has more chance to develop himself, and when he does it he need not envy the city man who steadies his professional standing by fastening intellectual guy-ropes to the bell-call of every neighboring specialist. These dependents are not the backbone of the profession. They can only wriggle their way to patronage while they are riding the ground-swell of the bigger fish. They could not live so well in the country. We are speaking now of the extremes of dependents and independents in their respective types of general practitioners in and out of the cities. If they were to change places specialism in the cities would suffer and general practice in the country would hardly improve. So much for the claims of the progressive, wide-awake and self-reliant country practitioner.

Our correspondent allows the current of his enthusiastic advocacy of his class to take him slightly beyond his depth when he implies that living in the city is not more expensive than in the country, and that the metropolitan has everything he may wish for. Stop at the hundreds of signs on the avenue highways and side-street byways and ask how it is. To display such a light on a city bill is very different from merely removing the country bushel. The yearly rental of a house on an avenue would buy a country cottage, while the first cost of a coupé would cover the contract for a barn, with possibly a good horse thrown in. Where much is spent much must be earned. The ambitious metropolitan works as hard as the rustic, with hardly as good a show on the grand track. They, in fact, both need rest. Both should take it. It would do the rural gentleman as much good to visit the city in the winter, and exchange his muddy paths for dry pavements and his snow-drifts for closed oars, his patient's bedside for hospital ward and his saddle for the orchestral chair, as it would in summer for the city man to climb the hills, to sail the lakes, cast the fly, or hunt the deer. It is the change which gives the rest—the rustic may study interiors, the metropolitan develop exteriors. Both would be benefited thereby and escape the effects of that continuous drudgery which too often breaks the backbone of a noble aspiration.—*New York Medical Record*.



INVERTED UTERUS OF THIRTY YEAR'S STANDING REDUCED.—Dr. A. T. Wm. Lytle, of Griffin, Georgia, reports in the *Louisville Medical News*, October 25th, the reduction of an inverted uterus, of thirty year's standing. His method of proceeding is not very lucid. Such a case deserves to be reported more particularly, as it seems to be unprecedented.

PROF. VIRCHOW was recently elected to the German Parliament by a majority of 7,956 over his opponent, Dr. Stoecker.

DR. BATTEY has recently done his operation thirty-four times without a fatal case.

VISITING LISTS FOR 1885.

MESSRS. P. BLAKISTON, SON & Co., 1,012 Walnut Street, Philadelphia, issue as usual their Visiting List for 1885. This is the thirty-fourth year of its publication, and it has always been a favorite. It is substantial, durable and complete.

MESSRS. WM. WOOD & Co. publish the *Medical Record Visiting List*. It is handsomely bound, printed on fine paper, arranged with all the conveniences to aid the memory in time of emergency, and is very highly prized by those who have used it longest.

THE ILLUSTRATED MEDICAL JOURNAL COMPANY issue a rather more elaborate *Physician's Pocket Day-Book*, designed by C. Henri Leonard, M.A., M.D., Detroit, Michigan. It is not so convenient for the pocket, but has many admirable features, calculated to aid the doctor in keeping up with his visits and the cash income.

QUININE FOR EVERYTHING.

During the march of General Lee's army from Richmond to Appomattox there was great confusion. Numerous stragglers would rest in groups planning campaigns for self-defence, probably, and distributing that sort of intelligence among one another which enabled them to know in advance of the Commanding General where they would probably fight, rest or get rations. I happened upon one of these groups, and was so struck by something that seemed to interest so many, that I reined in to watch their movements. One good-looking fellow was in the midst a-straddle a log, and was industriously clawing powders out of his pocket. He rummaged every place a pocket could be put in a soldier's clothes, and piled up in his hat a large number of these papers, as nearly to fill it. At first I was not noticed, and all of his comrades seemed to be intent on seeing how many of the precious things he could find. Looking up, the man of many powders discovered me, and recognized that I was a medical officer, enquired rather quizzically :

"Doctor, don't you know what these is?"

As I could not guess, he went on to explain : “ You see I’m from Georgy, where they has the chills powerful. My old woman she wrote me how as she and the children was having the shakes, and couldn’t git no qui-nine (pronouncing his i as in fine), so I thought I could fix that easy. We had a doctor in our regiment that give qui-nine for everything. So every day I would go up at sick-call, and every day I would have something new. ‘Let me see your tongue,” he would say, and hardly before I could poke it out he would tell the steward to give me some of them qui-nine powders. So when I got a right smart together I would send ’em home in a letter. But we’s had no way here of late to git ’em off, and I’ve got these many left, and I guess they’ll keep us a goin’ for sometime.”



PROGRESS OF MEDICINE.

N. Y. Med. J. (45.) 14: 223-225, #5, Nov 1884

LOCAL AÆSTHESIA BY COCAINE.—Dr. Koller’s observation of the effects of cocaine, in diminishing the sensibility of the eye, has been taken up with great enthusiasm by ophthalmologists, and numerous experiments and clinical observations have already appeared in print. In this country, especially, has the interest awakened by this important discovery borne practical results in various ophthalmic procedures. Dr. Noyes, of New York, had the good fortune to witness the application of Dr. Koller’s solution to patient brought for that purpose before the Ophthalmological Congress at Heidelberg in September last. Since the publication of these observations Drs. Knapp, Roosa, Agnew and others have made more extended investigations, which entirely confirm the first statements regarding its anæsthetic and analgesic powers.

Long before Koller’s observations were made, it had been known that cocaine possessed the property of lowering—even of destroying—the sensibility of the sensory nerves. This physiological property had been ascertained by Schroff, but was more definitely established by Moreno y Maiz, whose monograph on the erythroxylon coca appeared at Paris in 1868 (*Die Pflanzenstoffe*, pp. 91-93). The latter distinctly states that cocaine has the power to impair sensi-

bility when locally applied (*Ibid.*, p. 93), and is consequently entitled to the distinction of having made this important discovery. Dr. Koller has simply revived knowledge already existing; his merit, indeed, is less than this, for laryngologists have been using a cocaine solution locally to diminish the sensibility of the larynx to facilitate manipulations on that organ. *Palmarum qui meruit, ferat.* The investigations of an American physiologist have, also, been quite overlooked. Dr. Ott made an elaborate study of cocaine, and demonstrated its chief properties ten years ago (*Cocain, Veratrin, and Gelsemium*, Philadelphia, 1874). He showed, by experiments on animals, that at first and in small doses it stimulated and afterwards in sufficient doses entirely destroyed sensibility, and that this result is due to an action on the posterior columns of the cord and on the sensory nerves.

All observers are agreed that cocaine is a mydriatic. Knapp has shown that "it is a mydriatic which, even in producing a maximum dilatation of the pupil, takes away only a fraction of the power of accommodation." The mydriatic effect, further, is peculiar in that "the accommodative power is restored much sooner than the normal size of the pupil." The dilatation of the pupil begins in from ten to twenty minutes after the solution is instilled into the eye, and reaches its maximum in from thirty to forty minutes, remains stationary for half an hour, and then slowly declines, disappearing wholly within twenty-four hours (Knapp).

It is a fortunate circumstance that cocaine does not irritate the eye, and, when the solution is instilled, no pain or discomfort of any kind is caused by it. The sensibility of the eye begins to lessen in three minutes, and continues to diminish for about twenty minutes, when a restoration to the normal rather quickly takes place, the sensibility being restored in about a half-hour. The same strength of solution is not equally effective in all persons; there are the same variations in susceptibility as are manifest in the actions of other narcotics, but, on the whole, the qualitative effects are remarkably uniform.

Two per cent. is the strength of the solution which has been chiefly employed, but this is not strong enough in many cases. A four per cent. solution will, probably, prove most generally suitable. As the analgesic action continues about half an hour, and begins within five minutes after the application, we have in these data the

guides to the time and number of instillations necessary. Every four minutes for twenty minutes previous to the time of the proposed operation, three, four or five drops should be put into the eye. If the procedure undertaken occupies more than five minutes, renewed instillation becomes necessary at the same rate as before.

The application of cocaine will probably facilitate manipulations of various kinds. Reference has been made above to its utility in laryngological operations. Roosa has employed it with success in tympanic neuralgia"—two instillations relieving the pain in ten minutes. Knapp ascertained by actual trial that the preliminary injection of cocaine solution rendered the passage of urethral instruments painless.

The foregoing facts indicate a wide range of usefulness in the applications of cocaine. It promises to facilitate in a remarkable degree various operations and manipulative procedures on the eye, ear, larynx, urethra and rectum. As it removes the sensibility of the sensory nerves, and is itself free from irritating qualities, subcutaneously, probably, it will be found to relieve peripheral neuralgia, and other local painful affections. How far its systemic action will antagonize painful states of the sensory nerves remains to be established, but as it influences the sensory columns of the cord as well as the spinal nerves, there is a high degree of probability that it will prove effective in such cases.

Cocaine is an alkaloid obtained from *Erythroxylon coca*. It has decided basic properties and combines with acids to form salts. The alkaloid itself is but slightly soluble in water, but the salts dissolve readily. The hydrochlorate has, thus far, only been employed for the purposes above mentioned.

The only official preparation of erythroxylon is the fluid extract, and this appeared for the first time in the Pharmacopœia of 1880.—*Medical News*.

"DIPHTHERIA SPREAD BY ADULTS."—MR. EDITOR:—The article in your issue of the 9th instant, entitled "Diphtheria Spread by Adults," ought not to pass by without a protest, or at least some form of a denial. Dr. A. Jacobi's views on diphtheria, according to that article, are full of vagaries and contrary to clinical facts. The chief harm that can come from them is that some people *may* believe them. If this, his "cannon ball," be accurately aimed, there

would be nothing left for the "pistol bullet" to destroy. In the first place, there is no reasonable doubt that diphtheria is contagious. That it is invariably so has not yet been proved, and probably never will be. The isolated, solitary cases often appearing in the country, in which no possible source of contagion can be traced after careful investigation, are pretty good evidence that diphtheria may, in some instances, have a spontaneous origin.

In the second place, "what has been called follicular tonsillitis is" not "mostly diphtheria." There are cases of sore throat so mild and so peculiar that it is difficult to decide positively what their true character is. But these cases are so few that they do not constitute even a *respectable* minority.

In the third place, it is very far from the truth that "There is as much diphtheria out of bed as in bed; nearly as much out of doors as in doors." Of course it is probable that some of Dr. Jacobi's "mild cases of diphtheria" which "have continued six or even nine months," may be out of doors before complete recovery. No one denies that all reasonable precautions should be taken to prevent the spreading of this terrible disease. The "nares and throats of all attendants and help" should be examined. So also "the sick nurses, the cooks, teachers, hair-dressers and barbers, shop-keepers and restaurant-keepers" should be looked after. But why stop here? Why not station special examiners on all street-corners, in all railroad stations, at all country cross-roads, and in numerous other places, so that those who are in constant contact with all classes and ages," and especially those "who are out of bed and out of doors," may be kept from a possibility of spreading any possibly contagious disease? Perhaps some labor-saving machine could be invented and used that would facilitate these examinations.

Yours truly,

D. S. KELLOGG, M.D.

Plattsburg, N. Y., October 13, 1884.

"In the daily press we observe," says the *Philadelphia Medical Times*, "that Judge Tourgee (a name not unknown to some of our North Carolina readers) is credited with the statement that the pathway to success is so plain in the professions of law, medicine and theology, that it almost requires the possession of genius in order to fail in any of them. He maintains an eloquent silence with regard to the profession of journalism: does he mean to imply that the same rule holds good, or is it reversed?"

COCAINE AS A LOCAL ANÆSTHETIC TO THE EYE.—*To the Editor of the Medical News:*—SIR:—I notice that several observers report in your last issue their experience in the use of muriate of cocaine. I think that the best results may be obtained from its use if the interval between the first instillation, in eye cases, and the first step in the purposed operation is not so long. So far, in my experience with its use in ophthalmic surgery, the best method of application is as follows: Wash the conjunctival surface of the eye to be operated upon by flushing it with a solution of boric acid, one to twenty-six. Then drop two or three drops of the four per cent. solution of the cocaine upon the scleral conjunctiva beneath the upper eyelid, the eye in the meantime being turned downwards. In two or three minutes instil two or three more drops. Repeat the instillation four or five times in the course of fifteen minutes, and make the first cut in the proposed operation immediately after the last instillation, if conjunctival sensitiveness is gone. I have seen the sensitiveness of the conjunctiva fully restored in less than fifteen minutes from the first instillation, when complete analgesia had been present. So far as my present experience goes, I would advise that the agent should be employed "blow upon blow" with shorter intervals than some of the observers quoted in your columns would seem to approve of. C. R. AGNEW, M.D.

New York, November 8, 1884.

THE AMERICAN SYSTEM OF PRACTICAL MEDICINE.—From the publisher's prospectus (Messrs. H. C. Lea's Son & Co.) the American profession will have in the above-named work a complete system of practice worthy of the name. It is edited by Prof. William Pepper, with the assistance of Dr. Louis Starr, of Philadelphia.

The work has been allotted to well-known authors in their special departments, and numbers authors widely known for their ability to observe, their honesty to record, and their skill to write.

The work will be complete in five volumes of 1,000 8vo. pages, at \$5.00, \$6.00 and \$7.00 a volume, the first volume to be ready in February. It is sold only by subscription.

ENCYCLOPEDIA OF WIT AND HUMOR is the name of a work proposed by Dr. Julius Wise, of St. Louis (806 Olive street), who would be glad to receive suitable material from any of the profession who will kindly aid.

NOTES.

JOURNAL SUBSCRIPTIONS.—We hereby thank our patrons who have so kindly responded to bills for subscription recently sent out. There are many yet outstanding that might easily be paid if our friends would take the trouble to do so, and we commend this notice to their attention.

FLUID EXTRACT OF CORN-SILK.—Messrs. Parke, Davis & Co. announce that they have secured a stock of this fluid extract from the fresh drug, which physicians may rely upon as active and up to the best standard of strength. Heretofore the stock in the country has been poor and limited.

DEATH OF DR. S. M. BERNISS.—We regret to be called upon to make the announcement of the death of this distinguished member of the New Orleans profession, which took place at his home on the 17th instant. Dr. Berniss was sixty-four years of age. He was well known as a conservative teacher of medicine, and his labors in the cause of public health were marked by courage, prudence and wisdom.

THE PHILADELPHIA MEDICAL TIMES.—We take great pleasure in especially commending this Journal to our readers. It is bi-weekly, and is printed in the very best style of the typographical art. Its original contributions are always good, its selections in good taste, its editorials on timely topics, its reviews of books reliable enough as a guide when to purchase. It is now published at \$2.00 a year.

ANNALS OF ANATOMY AND SURGERY.—We are pleased to receive the announcement that the above Journal will be resumed under the able editorship of Dr. Lewis L. Pilcher. The bound volumes of the first series occupy a conspicuous place in the library of this office, and are considered the best original products of the American profession in these departments. We will welcome it back to our exchange list with pleasure. The place of publication will be St. Louis, instead of Brooklyn.

C. W. PRINDLE, M.D., of Grand Rapids, Michigan, states:—"Have used *Tongaline* extensively in all forms of Neuralgia and Rheumatism, finding it a safe, easy and efficient remedy. For all the cases of neuralgic or rheumatic pains, accompanying the colds, that predominate in this damp and malarial region, it seems to be a specific. I take pleasure in recommending it to the profession."

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

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SELECTED PAPERS.

ON ASPIRATORS: THEIR USE AS A MEANS OF DIAGNOSIS AND TREATMENT IN DISEASE.

Read in the Section of Pharmacology and Therapeutics.

By F. BOWREMAN JESSETT, F.R.C.S.,

Surgeon to the Royal General Dispensary, London.

The great importance of the use of the pneumatic aspirator as a means of diagnosis and treatment in many diseases, is not, I believe, so fully recognized in this country as it deserves.

How often have we, as surgeons, met with deeply-seated swellings in the abdomen and limbs, and have been quite uncertain as to their character! We have all met with sarcomatous growths which, from their elasticity, have given to one the idea that they contained fluid of some sort. I have witnessed, on more than one occasion, a patient operated upon for ovarian tumour, which, when the abdomen was opened and the cyst tapped, proved to be a large hydatid, connected with the liver or elsewhere; the nature of which, had it been explored with the aspirating needle before the operation, would have been recognized, its contents withdrawn, and the patient cured without being put to the risk of abdominal section.

I propose, to-day, to inquire into: 1st, the history of the aspira-

tor, and the different forms in use ; 2d, the use of the instrument as a means of diagnosis ; 3d, its use as a means of treatment.

HISTORY.—The first instrument of which I can find any account, was introduced and suggested by Dr. Newington of Ticehurst. He got the idea from his brother-in-law, a colonel in the army, who told him he had constantly seen the natives, in India, thrust long pins into their livers, often several at a time, without producing any inflammation or other bad effect. Dr. Newington was at once struck by this story, and how important, as a therapeutic agent, an instrument would be for emptying abscess of the liver. He therefore invented an instrument, consisting of a hollow needle with a small India-rubber ball at one end. It was intended to force the air out of the ball, and thrust the needle into an abscess of the liver, a distended bladder, or any other internal organ, from which a fluid was to be extracted, and, by relaxing the pressure upon the India-rubber ball, withdrew the contents.

This instrument he sent, with a full description, to Dr. Simpson of Edinburgh, twenty-three years ago, or about the year 1861. The instrument, although of great use, was imperfect, as, if there were more fluid in the cavity to be emptied than would fill the India-rubber ball, the needle had to be withdrawn, the ball emptied, and the needle reintroduced. To get over this difficulty, he introduced a tap into the shaft of the needle, and the bottle was made so as to be easily removed from the needle, leaving it *in situ*, emptying the bottle and refixing it to the needle.

It was not until the year 1869* that the instrument attained anything like perfection, and the importance of the use of the aspirator was fully recognized by Dr. Dieulafoy of Paris. This gentleman adapted an ordinary glass syringe, capable of holding three or four ounces of fluid, for the purpose. The syringe is furnished with two taps at the end, by closing both of which, and drawing up the piston to its full extent, a *vaenum* is formed ; there is a notch in the piston-rod which, when the piston is fully drawn out, is fixed by a slight twist from left to right, so that the piston cannot be driven down by atmospheric pressure. The needle or trocar is then attached to

* Dr. Henry J. Bowditch, of Boston, is undoubtedly entitled to the priority of discovery of an evacuating trocar, thirty or forty years ago, and was the first surgeon to practice and teach *thoracentesis thoracis*.

the aspirator, if necessary, by means of caoutchouc tube. The tap corresponding to the cannula is opened, and the fluid flows into the pump. When this is full, turn the tap off, and open the other, force the piston down, and empty the pump; then, by turning both taps off, and drawing out the piston, again reforming a vacuum, and repeat the process until the cavity is empty, or you think you have withdrawn enough fluid. The instrument being made of glass, you can at once see when the cavity is empty by the fluid ceasing to be drawn into the vacuum of the aspirator.

Dr. Dieulafoy recommends four needles of different sizes, namely, 1-50, 1-251, 1-20 and 1-12 of an inch in diameter, and he calls these No. 1, 2, 3 and 4 needle.

Dr. Protheroe Smith claims priority of invention to Dr. Dieulafoy, as he suggested a set of exploring needle-trochars with exhausting syringe attached, which he exhibited, in the year 1867, at the annual meeting of the British Medical Association held in Dublin. His instrument was only a slight improvement upon that suggested by Dr. Newington, and not nearly so perfect as Dr. Dieulafoy's. We find, however, that Dr. Brisgen of Brussels disputes the claim of Dr. Dieulafoy to be the original inventor; and he published a pamphlet, in September, 1869, in which the identical syringe is depicted, it having been used in the case of the Crown Prince of Belgium. Dr. Brisgen maintains that Dr. Dieulafoy, by some modifications he introduced, spoiled the instrument.

There does not appear to have been any improvement in the instrument until the year 1874, when Messrs. Weiss & Son introduced an improvement. It consisted of a reservoir of either glass or metal, an air-pump, the necessary tubes and needles. The instrument has these advantages: the reservoir is capable of containing a much larger quantity of fluid than Dieulafoy's syringe, and is emptied by a tap at the bottom. The tube is fitted with a three-way stopcock placed over an India-rubber cork, which fits accurately into the top of the reservoir.

In the latter part of the same year Messrs. Salt & Co. of Birmingham submitted a new form of aspirator; this instrument was originally made by Charrière of Paris for Dr. Dieulafoy. The instrument is fixed to a table for use, so as to leave both hands of the operator free. The piston is worked by a rack-and-pinion action, with lever handle, whereby it can be raised with great ease to any

part of the cylinder, where it is fixed by a self-acting catch to prevent recoil. Three taps are provided, so that a two-fold operation can be performed by emptying the cyst and washing it out afterwards with water or any medicated fluid the surgeon may wish to use.

Mr. J. Wood, in 1875, suggested a slight alteration, namely, instead of a three-way tap at the top of the bottle, as in Weiss's instrument, to have a simple stopcock on each side of the stopper.

Dr. Gritti of Milan, in 1876, suggested a very simple and inexpensive form of aspirator. The instrument consists of a double-ended India-rubber syringe, resembling an ordinary Higginson's syringe, to the tubes of which are fixed nozzles adapted to fit into aspirating needles or trocars. Before using the instrument for aspiration, the tubes and ball are filled with water, and, after introducing the needle into the cavity to be emptied, the inlet-tube is fitted into the needle, and the instrument worked in the ordinary way until the desired amount of fluid has been withdrawn. If it be desirable to inject or wash out the cavity with any antiseptic, this is readily done by reversing the apparatus and fixing the outlet-tube on to the needle. In 1874 Messrs. Salt & Co. fitted up a director to the ordinary needle, so that, if the surgeon think it desirable to make a free opening after evacuating the fluid, the needle can be withdrawn, and the director used as a guide.

Dr. Godrich, recognizing the danger of the point of the needle wounding the lung, or any other viscus or serous membrane, while aspirating a cavity, suggested a double cannula, the outer one with the point to draw back over the inner one, so as to sheath the point.

Sir Joseph Fayrer introduced a modification in the instrument, which is worked with a flute-stop similar to that used in the stomach-pump. A piece of glass is introduced into the India-rubber tube, and the needles are made very much larger, and the points guarded.

Dr. Moses Gobard describes an instrument which, for its simplicity and portability, recommends itself to one's notice. It is simply a piece of India-rubber tubing connected to an India-rubber stopper, which fill any ordinary bottle; to the end of one tube is fixed the needle, and to the other a thin flexible India-rubber ball. The *modus operandi* of the instrument is this: a small quantity of ether or other volatile fluid is put into the bottle, the stopper is

forced into it, and the bottle is plunged into hot water; the fumes of the ether expel the air out of the bottle, which is expelled by ether-vapour. Turn the stopcock attached to the needle or cannula, and place the bottle into cold water, which condenses the vapor of the ether, and a vacuum is formed, as witnessed by the collapse of the thin India-rubber ball.

Dr. Potain's instrument is the most perfect at present in use. It consists of an exhausting syringe connected to an India-rubber stopper that will fit any ordinary bottle. At the other side of the stopper is another, but to which is connected the needle or trocar. The stopper being fitted into an ordinary bottle, the air is exhausted by the syringe, and the instrument used in the ordinary manner. Dr. Potain has introduced a number of long trocars and cannulæ to his instrument, a common socket fitted with a tap being adapted, so as to fit all the cannulæ accurately. The cannula having been inserted into the cavity to be emptied, the trocar is withdrawn and the tap turned, and the pneumatic aspirator affixed. He also has some blunt pointed probes made, which fit the cannula accurately, and which are used in case the cannula should become blocked.

The great objections to this and the other aspirators described are the price, and the fineness of the needles or cannulæ, so that they become very easily blocked up. To avoid this, I have suggested a form of aspirator which has been made for me by Messrs. Maw, Son & Thompson, which, from its simplicity of action and moderate price, will, I hope, recommend itself to all. It consists of a wide-mouthed bottle, to the top of which is accurately fitted a metal cap, connected with which, on one side, by a strong caoutchouc tube, fits an ordinary Higginson's syringe, to the other extremity of which is another tube fitted with a nozzle, which is adapted so as to fit accurately the needles or cannulæ. To the other side of the brass cap is the inlet tube, one-fourth of an inch in diameter, fitted with a strong piece of tubing to a nozzle, which fits all the needles or cannulæ. There are three needles, 1-20 to 1-12 and 1-6 of an inch in diameter, all of which fit a common connecting point furnished with a tap. The object of this is that, when the cyst is emptied, if the surgeon wish to inject an antiseptic fluid, he can do so by disconnecting the syringe from the bottle, and affixing it to the cannula.

As, by this instrument, it is impossible to exhaust all the air in the bottle, I have adapted a thin leather valve to the inlet pipe, so

that, should any violent inspiratory effort cause a suction on the pipe, the valve will close, and thus prevent the return of any air or gases. While the bottle is filling with fluid, the India-rubber syringe is kept at work, and so, in a very short time, the cavity can be emptied. At the same time, should the patient show any appearance of dyspnœa, the operator can stop at once. By this instrument, by removing the bottle and attaching the India-rubber bottle directly to the needle, you can pump the contents directly away, and also, if you wish to wash out the cavity, you have simply to reverse the action of the syringe.

THE PNEUMATIC ASPIRATOR AS A MEANS OF DIAGNOSIS.—Perhaps there is no part of the body in which the aspirator may be used with so great advantage as in the abdomen, for the purpose of diagnosing tumors, etc. Patients often present themselves with hard, perhaps small, tumors of the liver, and it is difficult to determine whether they are abscesses, hydatid cysts, or malignant growths; the use of the aspirator at once sets the question at rest. In a case reported by Dr. Laffan, a patient, a hard drinker, presented all the symptoms of abscess of the liver. To decide the question, he determined to introduce Dieulafoy's aspirator, which he did in six different places, with a negative result; thus the diagnosis of abscess was proved to be incorrect.

Mr. T. Pridgin Teale relates a somewhat similar case, in which he was called to examine an abdominal tumor. A large, apparently solid tumor, of uneven surface, in which fluctuation could not be detected, filled the lower part of the abdomen. Seeing that the tumor, if ovarian and non-malignant, was probably polycystic, he introduced the needle of the aspirator, first in one prominent part and then in another, and drew off, in the first instance, an ounce of tinted viscid fluid, and in the second, clear liquid fluid. Thus was proved the existence of a multiple cystic disease of the ovary.

Another case, occurring in my own practice some time since, that illustrates this well, was that of a very fat woman, who had a tumor in her abdomen of the size of a large cocoa-nut. I diagnosed ovarian tumor. Another surgeon who saw her thought it was a fibroid; I decided to introduce the aspirating needle, and so decide the question, which was done, with the result of withdrawing a quantity of characteristic ovarian fluid. I operated upon

the woman, removed an ovarian tumor, and she made a good recovery.

It is often very difficult to determine the character of tumors connected with the ovary and uterus; and here the aspirator is of the greatest possible service, and I cannot help thinking that, if it were more frequently used, there would not be the occasion for so many exploratory abdominal sections.

Then, again, in obstruction of the bowels, frequently it is most difficult to determine where the obstruction is. If the obstruction be solely situated in the rectum, or lower part of the sigmoid flexure, and if it be of such an urgent character as to demand immediate relief to the patient by opening the colon in either the right or the left loin, or in the sigmoid flexure itself, here the aspirator is of great service; as if, in thrusting the needle into the descending colon, if flatus and liquid fæces do escape, then we know that the disease is situated lower down. In such a case the surgeon would be saved the mortification of cutting down on and opening a portion of the gut that is already invaded by disease, a circumstance which would enforce his performing a second operation on the opposite side, and so increasing the danger to the patient's life very materially.

A case of a lady who had been under the care of one of our most illustrious London physicians for supposed cancer of the liver is one in which, if the aspirator had been used, all doubt would have at once been dispelled. When she came under my care, she was apparently within a few hours of her end; she had a large tumor, extending from the right iliac fossa, occupying the whole right iliac and hypochondriac regions, extending forwards over the epigastrium, and occupying the greater part of the left hypochondriac region. The tumor was hard, smooth and tender. The patient was suffering from vomiting, and when I saw her in a state of collapse. The bowels had been open, with slight liquid fæces. I immediately suggested that the physician under whom she had been should see her, which he did the same evening. He then told me our patient had cancer of the liver, and would die in the course of twenty-four hours; at the end of that time, however, she was alive, and another physician was called, who corroborated in every particular the diagnosis of the former physician. I asked him if he had any objection to my giving large enemata, as I had an idea the patient

was suffering from a loaded colon. He gave his consent ; and, in less than a week, the tumor had all disappeared, and the patient is now alive and well.

I mention this case as one in which, if the physician she first consulted had inserted an aspirating needle, all doubt as to the nature of the tumor would have been settled long before it was, and the patient would have been treated for the disease from which she really was suffering, and her life would not have been imperilled.

A short time ago I saw a case of a girl with angular curvature of the spine, and a good deal of pain in her abdomen, extending to her left thigh. On deep pressure there was found to be a very decided fullness down the left side of the spine, apparently along the sheath of the psoas and iliacus muscles, but no fluctuation was discernable. I introduced the needle of the aspirator into the swelling, and withdrew a large quantity of pus. The pus, however, quickly reformed, and I then made a free opening into the abscess, in a line with Poupart's ligament, and washed the cavity out, inserting a large drainage-tube. Had I, in this instance, had a sufficiently large cannula, I am convinced I could have withdrawn the whole of the thick curdy pus that I removed by the second operation.

These cases could be multiplied to any extent, and I venture to think that there are very few of you but have witnessed such cases as I have mentioned.

Chest.—There is yet one more example in which I believe the aspirator might be used with very great advantage. I refer to cavities in the lung. At the Royal Medical and Chirurgical Society, a few weeks ago, a most interesting debate took place on what promises to be a good and safe method of treating cavities in the lung, either tubercular or those caused by gangrene or pyæmic abscess. But there was one point that struck me as very important, and that was the difficulty experienced by physicians in determining the exact position of the cavities to be treated. I cannot help thinking that here the aspirating needle will play a very important part, as, by introducing the needle of an aspirator armed with a director into the suspected part, if the surgeon failed to hit the cavity the first, second or third time, no harm would be done ; and at the same time undoubtedly directly the needle entered the cavity, the surgeon would be apprised of the fact by the withdrawal of the matter contained in the cavity. The needle would then be

withdrawn, the director being left in, and the surgeon would have a good and safe guide to the cavity which he wishes to keep drained, without putting the patient to the unnecessary risk of more than one opening into the chest before the cavity was discovered.

Then, again, in effusions into the pleura, it is often difficult to determine whether the case is one of simple pleuritic effusion or empyema.

A case came before my notice only a short time since, in a lad who had had some consolidation of the base of the right lung; from this he had recovered, but there was left a dullness over the whole of the lower part of the same side of the chest, with persistent high evening temperature, and it was a question whether there was a secretion of pus in the cavity or not. The needle of a fine aspirator was introduced into the lower part of the chest, and a small quantity of serum withdrawn. Thus the question was solved, and in a short time he was sent to the seaside; the effusion was absorbed, and the dullness completely disappeared.

Deeply Seated Abscess.—In deeply seated abscess the aspirator is of the greatest possible service, as often patients come before us with swellings deeply embedded in the muscles of the limbs. When there is no perceptible fluctuation, in fact, the swelling feels hard and elastic, but often there are only collections of pus, or cysts; a fine needle of an aspirator introduced quickly decides the nature of the swelling. Dr. Moore relates a case of a delicate boy, aged nine years, who for months had been under treatment of a hospital surgeon for a swelling in his thigh, and had been subjected to various kinds of treatment by local applications. The swelling was situated in the front and lower fourth part of the femur, evidently under the fascia. He quickly introduced the finest needle of Dieulafoy's aspirator, and removed about three ounces of pus. The thigh was next strapped round, to bring the walls of the abscess together; the patient was sent to the seaside, and had no return of the abscess.

THE ASPIRATOR AS A MEANS OF TREATMENT.—Having drawn attention to a few forms of disease in which the aspirator is of use to the physician or surgeon in the diagnosis of disease, I will now endeavor to point out the diseases in which it may be used as a safe and efficient means of treatment. For this purpose I have availed

myself of all the literature I can find bearing upon the subject. From the interesting and exhaustive experiments of Dr. Dieulafoy, he insists most strongly on the use of the aspirator as a means of diagnosis and treatment. It serves, in the first place, to show with certainty, and with no kind of danger, any collection of liquid, whatever may be its situation and its nature ; that aspiration may be repeated without any bad results, and almost always with the result of drying up the source of the fluid. He lays down the following law as the result of his experience, and I do not think we can do better than act by it. "When a fluid, whatever be its nature, gathers in a serous cavity, or in any organ, and when that cavity or that organ is accessible without danger to the patient, our first care should be to withdraw that liquid ; if it again form, it must be again withdrawn, repeating the operation frequently, if necessary, until the serous membrane is exhausted by a purely mechanical and quite inoffensive means, and without attempting to modify the secretion by irritating and sometimes dangerous agents." The principles of this rule are undoubtedly good, but I think now the latter part of it may be somewhat modified ; I refer to not attempting to modify the secretions. I think, without doubt, that much good may be effected by washing out cavities that have contained collections of pus with some disinfecting fluids, and, in some instances, I have no doubt it is advisable to inject fluids that will set up a certain amount of inflammation in the cavity.

The disease in which aspiration may be employed with success may be divided into five groups :

1. Fluids accumulating in serous cavities : that is, hydrocephalus, hydrarthrosis, pleurisy, empyema, pericarditis and effusion into synovial cavities.

2. Fluids formed in deep parts of organs : abscesses in hydatid tissues of the lungs or liver, cysts of spleen, omentum, ovarian cysts, retention of urine, strangulated herniæ.

3. Liquid formed within the cellular tissues of various regions : congestive abscess, bubo, perinephritic abscess, iliac or psoas abscess, peri-uterine abscess.

4. Collection of air or gases in cavities or organs : *e. g.*, pneumothorax, tympanites and strangulated herniæ.

5. Removal of *débris* from the bladder after lithotrity and diagnosis of tumor in the bladder.

Effusion into the Pleura.—There can be no doubt, I think, that when fluid is formed in the cavity of the pleura, the quicker it is removed the better ; that is, if it can be done without danger to the patient by the admission of air into the chest. How often one meets with chest-deformity, the result of old pleurisy, where the fluid has either been allowed to remain in the chest until such time as absorption has taken place, or until it is found that the fluid still continues unabsorbed, notwithstanding the use of medicine and internal absorbent applications, when it is removed by tapping ; not, however, until the lung is compressed, and in very many cases bound down by adhesive inflammation, and by bands of lymph. When once the physician is convinced that fluid is secreted in the pleural cavity, even in the acute stage, I am convinced that the sooner the fluid is removed by aspiration or by siphon-tube the better ; and even if the operation have to be repeated, two, three or four times, yet no mischief is likely to arise from the operation. On the contrary, by relieving the pressure on the venous circulation, the congested state of the lung will be relieved, and the patient be in a much more favorable position for recovery. In cases of chronic effusion, where the lung is already compressed, then it would be wise to remove the fluid as early as possible, and give the lung a chance of expanding again and regaining its functions. The same rule applies in empyema ; but in this case I think much good may be done by washing the pleural cavity out with some weak anti-septic lotion.

In chronic cases great care must be taken not to remove the fluid too quickly ; in fact, you cannot be too cautious, as there is always a fear of syncope ensuing. The reason of this is obvious, as the lung on the diseased side being bound down, and possibly diseased, or in parts in a state of collapse, the healthy lung cannot adapt itself at once to fill the cavity which has been emptied, and venous congestion and syncope are very likely to take place. Dr. Douglas Powell, Dr. Godrich, Dr. Behrer and others, have drawn attention to this point. I cannot, however, but think that the danger from this source has been somewhat overrated ; at any rate, out of a number of cases I have seen operated on, I have never seen any dangerous symptoms take place. Neither can I understand how such a state of things could take place ; as it is evident that, unless very great suction-power be exercised, it would be impossible to

draw out the fluid so as to give a vacuum in the chest. The aspirator that Messrs. Maw & Co. have made, and which I now have the pleasure of introducing to the notice of the Association, at any rate obviates all risk of such an accident, as by it you have the reservoir completely under control, and you can exercise any amount of suction you like.

In cases of chronic pleurisy, however, I should prefer aspirating the chest on more than one or two occasions, and emptying little by little, and so giving the damaged lung time to recover itself, without putting any very great extra labor on the lung on the sound side.

Dr. Godrich has called attention to the fact that he has seen the lung wounded on more than one occasion. This may be obviated by using a needle with a sheath to it; so that, as soon as you have introduced the needle into the chest-cavity, you can withdraw the point of the needle into the sheath; or the needle may be bent over at an angle of about 40° , so that the lung shall not be drawn upon the end of the cannula.

In cases of empyema, it has been objected that, although you may empty the chest again and again, yet the pus will rapidly reform; and that, therefore, it is far better to perform paracentesis with an ordinary trocar and cannula, and to introduce a long drainage-tube, the end of which is to be emptied under a solution of some antiseptic. It is urged that in this way the chest-cavity can thus be kept washed out as often as is required. I cannot myself see any advantage in this, as the chest may be aspirated and washed out as often as necessary without any danger to the patient's life. Other surgeons advocate a free incision in one of the intercostal spaces, and emptying the chest.

Pneumothorax.—In some cases of traumatic pneumothorax, I think aspiration may be practised with the best possible results. Dr. Herbert Page has published a case in which, owing to a wound of the lung caused by the in-driving of a fractured rib, there was pneumothorax, with total collapse of the right lung. There was great dyspnoea and collapse. The chest was punctured, four hours after the accident, by Dieulafoy's cannula; and, on exhausting the air from the pleural cavity by means of the pneumatic aspirator, immediate improvement in the condition of the patient followed. At the time of the operation blood was drawn into the receiver; and an examination of the

chest on the day after the injury revealed dullness on percussion at the base on the left side, due to the presence of blood. The aspirator was used three minutes subsequently, for the removal of the blood and the further withdrawal of air from the pleura. The patient made a good recovery. Dr. Page, while admitting the advantages of the use of the aspirator in these cases, drew attention to a possible source of danger from hæmorrhage into cavities exhausted of their contents by the aspirator. There can be no doubt that, in a case of wound of a vessel in the lung by the broken rib, accompanied by pneumothorax, the withdrawing the air from the pleura might, and probably would, encourage bleeding from the wounded vessel; but here, as in effusion of fluid into the pleura, I would urge the great importance of withdrawing the air very gradually, and not attempting to empty the chest-cavity entirely at the first aspiration. If this precaution be taken, I cannot think there is any very great risk of increasing the hæmorrhage. At any rate, as in the case related by Dr. Page, the relief given quite outweighed any danger there might be from such a source.

Pericarditis.—Removing fluid from the pericardium, by means of aspiration, in effusion into the pericardium, has been now practised in this country pretty often, but very much more so in France and Germany. Mr. Bartleet, of Birmingham, tapped a case of Dr. Russell's, who was suffering from acute rheumatism, urgent dyspnœa being the prominent symptom. He withdrew fourteen ounces of fluid, and the patient did well. Dr. Shingleton Smith also reports a case in which he removed a quantity of fluid from the pericardium, and the patient made a good recovery.

Ascites.—There can be no doubt of the use of the aspirator in removing fluid from the abdominal cavity in cases of ascites. The advantages over ordinary tapping are that the fluid can be withdrawn slowly and gradually, and can be stopped directly the patient shows the least sign of faintness or dyspnœa. The operation is so simple that it can be repeated again and again without any fear of setting up local inflammatory mischief.

Liver.—There is, perhaps, no organ in the body which is so subject to abscesses and hydatid cysts as the liver; and, in these cases, the aspirator can be introduced, the abscess or hydatid emptied, and the patient, in all probability, cured; at any rate, he is put in a very much better position than he could possibly be by any other mode of treat-

ment. Before the aspirator was invented, in cases of abscess of the liver, we were obliged to wait until there was adhesive inflammation, causing the peritoneum covering the abscess to adhere to the parietal peritoneum, before the surgeon could venture to open the abscess either by the lancet or by the trocar and cannula. Abscesses have often emptied through into the peritoneal cavity, with the result of the death of the patient, or they may have burst into some portion of the intestine, and so emptied themselves, in which case the patient usually recovered; they may perforate the diaphragm, and burst into the lung, the pus being expectorated, and here again many patients have recovered. While, however, the abscess was eating its way into these organs, the patient's strength often failed and he died.

The introduction of the aspirator has happily been the means of our saving many poor sufferers from months of agonizing pain, and also very many have been restored to health by its early application. I think it cannot be too forcibly impressed upon every physician or surgeon, that, if a patient present himself who has a circumscribed hard swelling in the liver, the nature of which is doubtful, it should at once be punctured with the aspiration-needle, and if it should turn out to be an abscess or hydatid cyst, by means of the pneumatic aspirator the cavity can be emptied. Again, I would go further and say that, if the patient present any symptoms of hepatic abscess, and if there be any one tender spot traceable over the liver, the surgeon is quite justified in puncturing the liver at the tender spot, with a view of discovering an abscess.

Surgeon Major Condon has recorded twelve cases that came under his notice and treatment: seven perfectly recovered and five died: of these five he points out that: "Four of them were in a dying state when received by me under treatment, and the operation was merely resorted to as a *dernier ressort*, and with the satisfactory results of relieving suffering and prolonging life." In one case he tapped an abscess fourteen times, when a second abscess was discovered, which was tapped sixteen times, and the patient was enabled to be removed to a P. and Q. steamer, and conveyed to England, where he died. Mr. Condon remarks that the enormous quantity of pus taken from the liver (about four hundred ounces) is, he believes, the largest quantity taken from a human liver on record. Numerous other cases have been reported by Sir Joseph Fayrer, Dr. Ball and others. Dr. Beahmy has practised it in many cases, and all but one were successful, in which case he did not reach the abscess.

In some cases recorded, when liver-abscess was suspected, the liver was punctured sometimes several times, and no abscess was discovered ; but the patients were very much relieved by the operation, the pain disappeared, and the distressing symptoms were much alleviated.

Dr. Heaton reports a case of hydatid of the liver successfully treated, and draws attention to the advantage of this instrument over the trocar and cannula, as in the latter you have to set up adhesive inflammation of the peritoneum before tapping. Cases also have been reported by Mr. Jessop, and also by many French surgeons.

Tympanites.—Aspiration has been practised successfully in extreme tympanites, and in emptying ovarian cysts ; but I do not know that there is much advantage in this instrument over the trocar and cannula in these affections.

Distension of the Bladder.—In distension of the bladder due to either impermeable stricture or traumatic rupture of the urethra, or either enlargement or cancer of the prostate, when it is found impossible to pass a catheter, I have had great reason to be satisfied with the use of the pneumatic aspirator, the bladder being punctured with a fine needle over the pubes ; and here I recommend the use of a large curved needle, so that you can efficiently empty the viscus.

In one case I had under my care, of impermeable stricture of the urethra, with retention of urine, in which I failed to pass a catheter, I emptied the bladder with the aspirator over the pubes ; and in a few hours afterwards the spasm being relieved, the patient passed his urine by the urethra. I was enabled to pass a small instrument through the stricture, which I split up, and the patient made a good recovery.

Hernia.—The French surgeons have practised with good results aspiration in cases of strangulated hernia, and in our own country cases have been reported by Mr. Jessop, of Leeds, and others. The cases in which it appears to me that such a course might be adopted are those in which there is a collection of fluid in the sac which prevents the surgeon from being able to use direct pressure on the strangulated gut, and cases where there is a collection of flatus in the gut itself, which increases its calibre and prevents its return. In such cases as these it is not difficult to see that great good might

result by aspiration ; and if, after removing the fluid in the sac, or the flatus from the gut, we fail to be able to return the hernia, I do not think the patient is placed in any worse position for operation than before.

Dieulafoy reports twenty-seven cases in which he used the aspirator for strangulated hernia, twenty of which were successful reduction of the gut by taxis following the operation. In the remaining seven cases it was harmless ; and of these three died, and four recovered after the ordinary operation for hernia.

At University College Hospital seven cases are reported, one followed by reduction, and no fluid was withdrawn from the sac ; yet the impulse returned, and the patient recovered ; in four it failed entirely ; in three of these the ordinary operation was performed successfully ; the remaining case was mentioned at the time of operation. At the *post mortem* examination no gas could be squeezed from the punctures of the needle.

Joints.—In cases of effusion into the joints much has been said and written ; but I think now, in France, especially, the importance of removing fluid from synovial cavities is fully recognized ; and in this country it is practised very much more frequently than it was a few years since. In a discussion that took place some years ago at the Academy of Medicine in Paris, in which Dr. Verneuil, Demarquay, and others took part, the conclusions arrived at were that pneumatic aspiration in hydrarthrosis of the knee-joint, both in its acute and chronic form, is a most useful remedy. In the acute, when the pain is most severe, owing to dislocation of the capsule of the joint, and in the chronic form, that will not yield to any other treatment, the method of performing the operation is, I think, of great importance. An elastic bandage should be applied both above and below the knee, or broad strips of plaster would do nearly as well. These should be drawn tighter as the contents of the joint are withdrawn, which takes place very slowly, owing to the viscosity of the fluid. The cannula should be from a 1-20 to 1-12 of an inch in diameter, and the puncture should be made in an upward direction, but at the external edge of the patella. When the joint is emptied a little styptic collodion painted over the puncture, a small pad of antiseptic gauze or lint placed over, and the whole joint evenly strapped* up.

* Martin's rubber bandage answers best.—ED.

The leg should be bandaged, and, if thought necessary, an ice-bag is applied to the joint, and the limb, for a day or two, kept at perfect rest by the application of poroplastic splints. Mr. Jessop has practised aspiration successfully in pyæmic abscess of the hip and knee-joints, and has also reported cases of pneumatic aspiration in ordinary dropsy of the knee-joint. In cases of fractured patella, with either effusion of serum or blood, Mr. Christopher Heath has now, for some time, practised emptying the joint by aspiration before putting up the fracture; in this way he has obtained most happy results.

Abscesses.—Deep abscesses of the thigh or ilium, lumbar and psoas abscesses, may all be well treated by aspiration.

[Mr. Jessett exhibited and gave a demonstration of an aspirator suggested by him, and manufactured by Messrs. Maw, Son & Thompson, London, which, from its extreme simplicity and moderate price, may be in the hands of any practitioner.]

Dr. Finny, of Dublin, confined his remarks to the treatment of purulent or seropurulent effusions in the thorax. In his experience the best method was to give free vent, under due antiseptic precautions, by incision, to the fluid, which, so long as it remained, was a source of danger to the patient. Never having employed Dr. White's instrument, he had no intention to criticise adversely Dr. White's method of tapping the empyema, and by the siphon method draining it off before he resorted to incision. He protested, however, against the indiscriminate employment of washing out the pleural cavity with antiseptic fluid; as, unless the fluid were of a dangerous strength, it could do little or nothing as an antiseptic, and cases were on record of patients having evidenced toxic symptoms, due to the carbolic acid, the antiseptic employed.

Dr. Gray, of Castlewellan, agreed in the main with the remarks of Dr. Finny, that there was very little danger, with proper precautions, in opening the chest at once when it was ascertained that the effused fluid was pus, introducing a drainage-tube, and washing out the cavity. As an easy mode of introducing the tube, he recommended a common uterine sound to be introduced through the enlarged needle-hole, and pushed on until its point projected between two of the ribs, where it could be cut down upon, and pushed through. Upon this point the drainage-tube could be drawn and tied; then, by withdrawing the sound, the tube could be brought

out through the needle-hole, and the two ends could be tied together. Through this tube the pus drained, and through it the antiseptic fluid could be injected.

Dr. Cullimore, of London, said that, owing to the limited time at his disposal, he would direct his observations to the treatment by aspiration of hepatic abscess. At the present time, and also during his service in India, he had considerable experience in the use of aspiration. Soon after its introduction it was largely used; but he thought that its early gained success was not attended with the good results anticipated. When the abscess was deep in the substance of the liver, and the diagnosis was doubtful, then, after the lapse of some time to clear up the case, the aspirator might be used, sometimes with success, both as a method of cure and as a means of diagnosis. When the diagnosis was certain, and the abscess pointed towards the surface, after a certain time being allowed for formation of adhesions, the best method was either to use a trocar and cannula, or even incision, with antiseptic precautions. The objections to the use of the aspirator were that, from its great suction-power, it was liable to break down the walls of the abscess, and so increase the danger of the spread of the disease. As a means of diagnosis, in obscure cases, exploratory puncture should always be made. It could be done with safety, and contributed greatly, by clearing up the diagnosis, to the peace of mind of the patient.

Dr. White, in reply, stated that several of the speakers had misunderstood him, owing to his having been unable to go thoroughly into the subject from lack of time. He was anxious to correct the misapprehension into which Dr. Finny and Dr. Gray had fallen, as to the statement that air, entering the pleura after antiseptic precautions, was injurious. This was not only not the case, but, as was well known, the introduction of air, rendered aseptic, had frequently been used, and without bad results. Again, Dr. Finny thought that pus was left in the pleuræ. On the contrary, irrigation was to be performed by alternate injection and removal of the antiseptic solution, until what returned was quite free from pus; therefore, what was left behind was merely an antiseptic solution. Carbolic acid either should not be used, or, if employed, it should only be in the strength of two or three per cent. Numerous other solutions were to be preferred.—*British Medical Journal*.

ORIGINAL COMMUNICATIONS.

HÆMORRHAGIC MALARIAL FEVER.

By THOMAS F. WOOD, M.D.

This disease is by far the most fatal one due to climatic influences, without we might except the pernicious (congestive) form of malarial fever. Hæmorrhagic malarial fever seems so many times to be superadded to the worst types of malarial fever, that it bears rather the relation of an extreme pathological manifestation, in organs always implicated, than the distinct entity of a disease. Whatever may be the reasons for and against the erection of a new disease in the case of the one under discussion, it merited a specific nosological distinction, for the practical reason that treatment, to be successful, must depend upon an early recognition of the disease. When it is considered that we have here a malady which sometimes destroys life in forty-eight hours, and that in all aspects save one—hæmaturia—it many times differs in no respects from the ordinary ague, the necessity of precise diagnosis will be appreciated.

Hæmorrhagic malarial fever appears in all those countries where the pernicious form of malarial fever is bred. The season of the year most favorable for its propagation is nearly at the close of a malarial period—last of October to the middle of November—especially when the season has been productive of the more profound types of malarial disease. By far the larger number of cases occur among males, which may be due to their greater exposure to causative influences by reason of their occupation. Chronic malarial cachexia predisposes persons to renal hæmorrhage during an ague, but the robust are by no means exempt from it. It is certain, as laid down by nearly every writer on this subject, that the habits of life predispose persons to malarial hæmaturia; and certainly persons of habits of intemperance in the use of alcoholics—as in most other acute febrile diseases—have always a more doubtful prognosis.

Of the forms of hæmorrhagic malarial fever, the division already

made* into intermittent, remittent, pseudo-continued and the continued, answers for clinical purposes, carrying with it the idea of the supervention of hæmaturia upon the various known types of malarial fever. The gravity of the disease is nearly in the order in which it is named above. It is important to remember, though, that the intermittent variety is almost always irregular—of the double tertian or double quotidian variety. In such cases there is very little difference as to the prognosis between them and the remittent and continued form. It is the explosion of the malarial storm which causes hæmorrhage from the kidneys, and twice daily to have it recur is fraught with extreme danger.

From what has already been said, it may be inferred that hæmorrhagic fever differs very little from ordinary fever of the malarial type, and many times passes unnoticed until blood-stained urine is accidentally discovered by the patient or the nurse. It is true an early jaundiced condition may lead to a suspicion of the true nature of the case, provided other cases may have occurred during the season. But even jaundice is not a constant sign. Jaundice is many times not manifest until the patient has reached the fatal climax, or after death. It is sometimes transitory, occurring only as the patient makes an effort at vomiting, or assumes the erect position. It may be of any degree, from the slightest staining of the sclerotic to the deeper jaundice of yellow fever. If there be no jaundice, the complexion is always tawny or cadaveric, and the lips colorless, with a delicate pigmentation around their margins.

The temperature, in my experience, has not reached such high limits as I have seen in congestive fever. Going over the records of several cases 105 F. is the highest, and in only one instance; many cases did not exceed 103 F., while the average of maximum temperature was below this. The surface temperature shows a great disparity between that and the mouth or rectum. There is often extreme pallor and coldness of the skin and colorless lips, while the thermometer may register 101°–103°.

In the majority of cases of hæmorrhagic fever there is a history of a previous or a present attack of intermittent fever. The patient may not have taken to his bed for what he probably is familiar with as an ordinary attack of ague, and the evidences of a serious disease are entirely wanting.

* Sternberg: *Malaria and Malarial Diseases*, p. 302.

The hæmaturia may be of all degrees, from the slightest stain of hæmaglobin to a firm coagulum deposited in the urine. I have seen the latter condition once in a patient who went successfully through the attack, and who became deeply icteric late in the progress of his fever. The discharge of blood-stained urine takes place at the close of the cold stage in the intermittent variety, the time, indeed, of the greatest activity of the kidneys in ordinary cases of ague. Where the renal bleeding is copious the amount of urine is correspondingly less, and it is frequently observed that in serious cases the patient may go twelve hours, or longer, without any inclination to relieve the bladder. Dr. Sternberg, in his excellent work on "Malaria and Malarial Diseases" (p. 305), says: "It seems desirable, in view of the conflicting evidence before us, that more extended observations should be made with reference to the cause of the discoloration of the urine in this disease; for while we must admit that the presence of blood has been established in numerous cases, yet it is beyond question that bile-pigments are also present in large quantity, and perhaps more uniformly than blood."

The above inquiry I have been enabled to settle to my own satisfaction during the present season. I have treated many patients with hæmorrhagic fever, examining their urine day by day, and several specimens I have submitted to others, but in no case were blood corpuscles found, but certainly hæmatin was the coloring matter.

The subjoined statements are by Prof. James Tyson, of Philadelphia, and through the kindness of Dr. J. S. Billings, from the chemist of the Army Medical Museum, after examination of urine sent them by the writer.

Dr. Tyson found that it presented the usual characteristics of such urines. There were numerous hyaline, granular blood and epithelial casts, in addition to granular débris, mucus and bladder epithelium. One-sixth of its bulk was albumen. There were no red blood-corpuscles except those attached to the blood casts, so that the urine might be called a hæmaglobinuria rather than a hæmaturia, although he adds the blood-corpuscles may have been destroyed in transit.

At the Army Museum, where the same quantity was examined as by Prof. Tyson, viz: six ounces—one-half of that passed in twenty-four hours—the specimen contained hæmatin, which the chemist, Dr. Mew, estimated to be equivalent to an amount of blood six per

cent. in volume of the urine containing it. The specimen contained no blood-corpuscles and no micro-organisms discoverable by the use of high powers with the usual staining reagents. It gave no reaction to tests for bile. The spectroscopic examination gave the hæmatin bands distinctly.

An examination made by Dr. George G. Thomas, of about eight ounces of urine quite recently secured, and representing the most of a daily discharge, exhibited no blood-corpuscles. The specific gravity of these urines was 1025. Doubtless other examinations of freshly voided urine would have disclosed the presence of blood-corpuscles, as they have been by others,* and, as before stated, I have seen a firm coagulum in a urinal used by one of my patients suffering with this fever.

Post-mortem examinations are seldom permitted in private practice, and then under certain restrictions which limit their value. The constant pathological conditions which they reveal are, greatly enlarged spleen, congested and enlarged kidneys, distended gall-bladder, and deeply yellow-stained tissues, especially subcutaneous fat and omentum. The liver is sometimes surprisingly normal in size and color. In Dr. Joseph Jones' experience, founded upon numerous examinations, the liver is always slightly enlarged and altered in color (bronzed).

On section the kidney shows numerous small red spots, the points of hæmorrhage in the malpighian bodies, and surrounding them red tortuous vessels which are convoluted uriniferous tubules filled with blood.

In one of the post-mortem examinations made by the writer, the left kidney weighed eight ounces and the spleen fifty-six ounces—an enlargement which denotes an increase of double the size of a normal kidney in a woman of 120 pounds weight, and about eight times the size of a healthy spleen.

The case was that of a young married woman, native of this State, who had suffered, previous to the attack with which she died, with intermittent fever. Her skin was fair, and she was rather plump for one suffering with chronic malarial toxemia, making the

* Prof. Joseph Jones M.D.: "General Outlines of the Symptoms and Pathological Anatomy of Yellow and Malarial Fevers;" describes the presence of colored blood-corpuscles in the urine of one of his patients, P. 581 Louisiana Health Report 1882-1883.

icteric hue of the skin more intense. Hæmaturia lasted two days, when death ensued. Post-mortem examination twelve hours after death revealed a spleen filling two-thirds of the anterior part of the abdomen, having that peculiar outline of a kidney bean with the pelvis upwards. The liver was apparently healthy, but the gall-bladder was largely distended with dense bile. The urinary bladder was empty. The spleen and kidney were sent to the Army Museum.

The few opportunities afforded for cadaveric section, confirmed in every instance that an enlarged spleen was a constant element, and that induration was also a constant condition in those cases terminating in a few days.

We are indebted to Prof. Joseph Jones, of New Orleans, for the first pathological description of the kidneys in malarial hæmaturia.* Dr. Jones has very laboriously worked out the entire pathology of this disease, and has illustrated his descriptions with lithographs, which, if not executed in a high style of art, bring forcibly to the mind the gross appearance of the kidney. We borrow his histological descriptions with profound acknowledgments for his aid in this and other heretofore unstudied problems of malarial pathology.

He describes the appearance of the kidneys as follows: "When sections were made of the kidneys of those who had died in the acute stages of malarial hæmaturia, the cortical and medullary portions presented a deep purplish red and bloody appearance. The color was deeper in some portions than others, resembling circumscribed effusions of dark blood. In many cases all portions of the kidneys were altered in appearance and the tubuli uriniferi, especially at the termination of the pyramids, could be seen, resembling dark lines of coagulated blood. Microscopical examination of sections with Valentin's knife revealed the fact that many of the tubuli uriniferi, throughout their entire extent, were filled with coagulated blood. The hæmorrhage appears to have taken place through the malpighian corpuscles chiefly; little or no blood was effused around the tubuli uriniferi. It would appear that during the prolonged cold stage the kidneys become in this form of malarial fever, congested, in a manner similar to that which occurs in the spleen. During this congestion rupture of the blood-vessels and of the capsular membrane of the malpighian corpuscles occurs; such rupture being mainly due to their anatomical structure, and

* Louisiana Health Report 1882-'83. P. 580.

the greater tension of the blood in this portion of the renal capillary circulation. When from any cause the blood coagulates in the tubuli uriniferi, their function as excretory tubes is destroyed, and the extent of the impairment of the excretory function of the kidneys will depend upon the number of the excretory tubes blocked up by coagulated blood. The grand cause of the severe, dangerous and often fatal character of malarial hæmaturia will be found chiefly in these structural alterations of the kidneys."

The icterus in hæmorrhagic malarial fever is sometimes exceedingly superficial, giving the appearance of turmeric staining applied with a brush. Hypodermic injections, blisters or abrasions, cause a deep yellow bullous vesication at or near the injury, and, as Dr. Jones first pointed out, blood drawn from a needle puncture, taken up on white blotting paper, has always a staining of lemon yellow serum around the central blood spot—a beautiful application, by the way, of analysis by capillarity.

The blood, according to Dr. Jones (op. cit., p. 555), coagulates firmly, and there was no appearance of the destruction of red corpuscles in the serum. The increment of fibrin in the blood (4.5 parts per thousand) in this disease is of great interest, as indicating an inflammatory condition of the fluid, as well as of the organs most deeply involved, namely, the kidneys.

The Prognosis in this disease is always grave. If the proportion of blood-staining in the urine is deep, and its appearance continuous during several days, the danger is very great. If this hæmorrhagic condition is accompanied with vomiting and sighing respiration, and cold extremities, death will not be delayed long.

Intense icterus is of grave import, but many cases of gravity progress to a fatal termination without the slightest degree of it. A persistently low temperature—any degree below 98° F.—is unfavorable, if it succeeds a fever. It is usually accompanied with thirst and general pallor. The ears do not give any indication of red blood, but are translucent like wax. The intelligence of the patient is usually good to the end, notwithstanding the presence of morbid matters in the circulation, and so cannot be regarded as a specially hopeful indication. The character of the pulse furnishes a good prognostic indication. It is very thready and unsteady in fatal cases, and the first heart-sound very indistinct. Great restlessness is a frequent precursor of death, and is a most distressing

example of *besoin de respirer*, notwithstanding that the inspirations are deep and frequent. Patients may advance to this stage sometimes more than once in the same attack and rally again.

Favorable indications are, absence of vomiting, the easy maintenance of an equable temperature by bed-clothes, intermittent appearance of blood-stain in the urine with a copious flow of pale urine of low specific gravity, a pulse of good volume and steady rhythm, and fever heat not exceeding a diurnal maximum of 104° F. The condition of the patient at the time of seizure is also a very important factor. If leukæmic and short-winded, and possessing marked indications of chronic malarial diseases, his chances for recovery are very small. The average of mortality in such cases would be far above the percentage suggested by Dr. McDaniel, of Georgia, viz: 15 or 20—it would more probably be thrice that great.

TREATMENT.—The treatment of hæmorrhagic malarial fever cannot be said to have attained much success. In some sections, where a milder form of the disease yields to treatment quite readily, it may flatter one to suppose that he has fallen upon a certain line of treatment, but a longer experience is sufficient to demonstrate the contrary. The statistical method of proving the value of this or that form of medication is so far based upon too few cases of the disease. The tabulated cases given us in Sternberg on *Malaria and Malarial Diseases* (p. 315) are less than 500 in all, nearly half of them being from French sources, but indicating that the preponderance of success was on the side of treatment by large doses of quinine. If the pathology of the disease is considered in its entirety, the administration of quinine in decided doses is brought forcibly to the mind. The danger of fatal termination has its source and origin in the splenic engorgement primarily, and secondarily in the congestion of the kidney; for as the cold stage of an intermittent merges into the hot stage, the spleen increases largely in volume, greatly contributing to the arterial pressure in the kidney, causing a rupture of the blood-vessels of the glomeruli. The object of all treatment, obviously, is the prevention of the return of the fever. As has before been stated, the diurnal access of fever is more irregular and uncertain than in the ordinary forms of intermittent fever, and the administration of *quinine* cannot be so exactly timed as in that disease. It is absolutely necessary to

cinchonize promptly and profoundly. Unfortunately, gastric irritation is a very common concomitant of the stage of fever. The thirst is intense, and the patient has an almost insatiable desire, and but little ability to retain water on his stomach. In this state of things the administration is seldom successful, because it is rejected by the stomach, and because the stomach has very limited ability to absorb it. Delay will be dangerous, therefore every possible avenue must be opened by which to get the patient under the influence of the drug, especially in the quotidian and double quotidian forms. Hypodermic injections would suggest themselves by reason of their success in other pernicious forms of malarial, but there is not a solvent which is not liable to cause serious abscesses. I have used all of the solutions I could find suggested—citric, tartaric, hydrobromic, sulphuric, and finally oleic acid. The latter, while it makes a good solution of the neutral alkaloid if dissolved, does not succeed very well in its administration hypodermatically, because it oozes back through the puncture. As mild as the oleate prepared in this way seems to be, it has in my hands raised large blebs, filled with lemon-colored serum. This avenue of access to the circulation is highly important, notwithstanding the many drawbacks, and can be trusted as long as the circulation is active. It is necessary to make enough punctures to introduce a drachm or more of quinine, as it is unwise to force into one puncture enough solvent to carry a drachm of quinine, as bad sloughing of the skin will result, as I have had several times to regret. The abdomen and thighs are good points for puncture.

The endermic application of quinine is too slow a method of administration in this disease, even with the improved method by means of the oleate, although we might apply quinine, with good promise of success, as was formerly done in pernicious fever, by denuding the skin with Granville's lotion, and applying the drug to the surface in any soluble form. The vesication would in most cases be desirable to relieve the irritable stomach. The introduction of large capsules of quinine is also a valuable means to induce cinchonism, as in this disease we are not often foiled by irritable bowels. A good way is to introduce ten grains of sulphate of quinine every three hours, anointing the parts well with lard or petrolatum.

It will be observed that only intense cinchonism can be relied

upon, and as our patients will vary very much as to their degree of susceptibility to the agent, it is necessary to have some standard to govern us. My rule is to keep the patient, in the acute cases, in such a degree of cinchonism that they can just perceive the ticking of a watch at an inch. If this dosing may seem excessive, all doubt as to its propriety would be easily dissipated by observing a few cases at the bed-side. Destruction of the kidneys and spleen and obstruction of the liver, and a consequent fatal termination almost certainly follows if malarial poison is not extinguished by sufficient doses, and the danger of toxic effects from quinine is a remote contingency. The following cases taken from my note-book the present season will serve as illustrations :

Case 1.—Edgar E., aged 12, was seized with a chill on the 17th October. He has had previous slight attacks of ague for which no special treatment had been prescribed. He was anæmic, had a very large and tender spleen. His temperature at the acmé of the fever was 103° F. Frequent acts of urination resulted in the voiding of 8 ounces of blood-stained urine. Thirty grains of quinine ordered given as soon as the stomach would retain it. The opportunity to administer the medicine did not present itself until daybreak on the 18th, and only 15 grains were given when another chill came on, and nausea and vomiting were persistent. The vomited matter consisted of grass-green flocculi, with mucus and water. The fever attained at its acmé this day (second day of disease) 101.2° F. Another attempt was made to give quinine, but satisfactory quantities could not be retained, and a slight diarrhœa set in. The urine passed for twenty-four hours 12 ounces, distinctly, but not deeply stained with blood.

October 19th.—There was no return of chill this day, and the fever kept steadily at 101°. The diarrhœa still prevents the administration of quinine by the rectum. The patient is making great efforts to keep down capsules of quinine, but vomits frequently. The skin to-day is tawny and the lips bloodless. He complains of great heat, and lies as nearly naked as he will be allowed. Urine rather clearer and in larger quantity than yesterday, and the patient is greatly encouraged by this symptom.

October 20th.—Fever remains at 101° ; deathly pallor all over the surface of the body ; pulse small and quick ; cold extremities ; patient anxious, and breathing irregularly ; urine bloody ; thirst intense.

October 21st.—Death ensues, although the symptoms of early morning are more favorable. At noon sighing respiration sets in, intense thirst and vomiting with diarrhœa. There was no icterus before or after death. There was no cadaveric section. The patient had been treated by me two years previously for a similar

attack of fever, and there were two large cicatrices from abscesses following hypodermic injections of hydrobromate of quinine.

Case 2.—Charley E. (brother of *Case 1*), aged 9, had had repeated slight attacks of chills and fever, for which he had been taking quinine at the rate of 25 grains daily for three days. Notwithstanding this, on the 24th of October he was seized with an unusually high fever, with an evening temperature of 104.5°. Signs of blood in the urine, a well-known signal of disaster in this family, called my attention to his case. Quinine directed in 5-grain capsules every three hours.

October 25th.—Temperature fallen to 100.1° F. Complexion dusky. Nausea and thirst. Blood-stained urine in scanty quantities. About 45 grains quinine all his stomach retained.

October 26th.—Temperature 101° F. highest point. Nausea persistent. Administered quinine by the rectum 10 grains every three hours. Urine heavily loaded with blood, but scanty. Surface of body and lips bloodless.

October 27th.—Temperature morning highest point 103°; sighing respiration; pulse 136; cadaveric hue of skin; scanty and bloody urine. Has retained all the capsules by the rectum and by the mouth. In the morning he could hear a watch ticking at four inches; at night could hear it at one inch.

Died on the 28th of October, the end of the fourth day of the disease. In the 36 hours preceding death he took by the mouth, rectum and hypodermically 300 grains of quinine. Jaundice of a very deep hue appeared just after death, and all disappeared in 24 hours after. There were icteric streaks of a much deeper hue on the upper-lip. Small deep-hued suggilations appeared upon the extremities. At the point of insertion of the hypodermatic doses there were suggilation and superficial yellow blisters. The spleen could be clearly defined extending nearly across the abdomen.

Case 3.—R. C., aged 45, white, florid, weighing 180 pounds. Has not had a fever of sufficient importance to put him in bed for three or four years. His business exposed to night and early morning air upon the Cape Fear river. Early in October he had an attack of intermittent fever, which yielded partially to quinine, but kept recurring in diminished force until the 19th of October, when he had a decided chill. Urine 1030 bloody and copious as the hot stage came on. Five grains quinine ordered every three hours.

October 20th.—Had a chill and fever. Urine same. Quinine contained at the rate of 40 grains a day.

October 21st.—Evening temperature normal, although he had a chill in the morning. Urine loaded with blood-corpuscles, hæmatin, blood-casts and granular matter, specific gravity 1025.

October 22d.—Urine still loaded; T. 98.4° F.

October 23d.—Urine less in quantity and amount of blood-stained sediment much less. Afternoon ague, vomiting of grass-green viscid fluid, T. 103.1° F. Urine scanty and bloody. The amount of quinine increased to 75 grains a day, and calomel (8 grains) and soda bicarbonate (12 grains) ordered at bed-time.

October 24th.—T. Morn. and E. 98.4°. Urine slightly stained and copious. Large bilious stools. Same amount quinine administered.

October 25th.—T. M. 98.2°. Blood in the urine quite copious as on the 21st. Vomiting and nausea. Efforts at vomiting cause decided icteric hue about the face. T. E. 101.1°. Restless and anxious. Respiration embarrassed and irregular, Pulse 140. Seventy-five grains of quinine to-day. Can hear a watch at two inches.

October 26th.—Temperature normal all day. Nausea ceased. Icterus all gone. Urine 1.018, copious, not stained.

October 27th and 28th.—Still improving and quinine reduced to 40 grains a day. Convalescence was now established, and after a prolonged convalescence the patient recovered, but with a perceptibly diminished vigor.

The temptation to *administer morphia hypodermically* in the above case was great. The nausea at a critical time threatened to balk all medication, and small doses of morphia could be relied upon to relieve it. It was, however, withheld, and the vomiting fortunately ceased without it.

The above cases are taken seriatim from my note-book, leaving out many of the minor details of alimentation. Cases 1 and 2 are examples of the disease which are but the superaddition of hæmaturia to unarrested ague, one treated without quinine (because its administration was not practicable), and the other with what would seem to be enormous doses. Case 3 was that of a hæmaturia outcropping after a short course of ague, but after a probable latent malarial infection of long standing. There was no induration and tenderness of the spleen and liver, and the patient was considered "the picture of health" when attacked. It was only after he was so deeply cinchonized that he could hear a watch at two inches that his fever was conquered, and with it hæmaturia ceased. This patient was directed to continue Mist. Ferri Comp. (℞j) and Liquor Potassæ Arsenitis (10 gh.) three times a day for a month.

The hypodermic administration of morphine has been largely employed in this disease, but I believe without any good foundation in a knowledge of its pathology. When it is considered that the vital powers are being rapidly diminished by the destruction of the red corpuscles of the blood, and by their drainage through the kidneys; that the depurative function of the kidneys is materially crippled, not only inferentially, but by the absolute detection of its presence in the brain and other tissues of the body after death; the spleen inflamed and enlarged beyond its compensatory volume, and its circulation impeded by deeply pigmented lymph cells and destroyed blood-corpus-

cles transformed into black pigment, and an interruption of its blood making function. The spleen is furthermore obstructed by the condition of the liver (congested and infiltrated with bile and granulo-fatty matter), as the course of the venous blood in this organ is through the venæ portæ, and not directly to the venæ cava. Therefore the introduction of a narcotic into the circulation, when the blood is laboring under the toxic presence already of effete material, seems to me to be irrational and unwarranted. I have given it in some of my cases of hæmorrhagic fever, with no ill results, but latterly, with a better knowledge of its pathology, I have been willing to give it up, and surrender the slight advantage it gives by sometimes quieting the stomach, and by intensifying the quinine.

Mercurials.—Given in proper quantities and at the right time, no medicine can act a more satisfactory part than a dose of calomel. When the stomach is very irritable and the bowels inactive, given in combination with bicarbonate of soda in doses of 5 or 6 grains of the former to two or three times that of the latter, repeated in six hours when necessary, in most cases it relieves nausea and produces a gentle movement of the bowels. The dejecta are largely of old bile, which gives great comfort by lessing the engorged liver and emptying the gall-bladder. In cases where the addition of soda would make the dose too bulky it may be omitted, but the result is not as satisfactory. A little experience with calomel in the early hours of hæmorrhagic fever, will bring forcibly to the mind of the practitioner the confidence which the older generation of doctors had, and still have in calomel. To the largest part of the present younger generation of practitioners the sedative influence over the stomach and the gentle chologogne action of calomel, are unknown properties, but to see the clinical demonstration of the relief which calomel brings to cases in question—giving increased breathing space—by reducing engorged viscera, there would be little question as to properties ascribed to it by our seniors. But calomel is given with no other end in view than the relief of nausea and as a bilious purgative.

Ergot.—The fluid extract of ergot would suggest itself as a very appropriate remedy by reason of its power of contracting the small vessels, and also for its reputed influence over leukæmia. So far as I have observed there is not much to be said in its favor. The fluid extract is the reliable preparation, and to give it in sufficient doses by the mouth is not very often feasible. Hypodermic injections of

Squibb's fluid extract prepared by evaporation at a low temperature, and afterwards by solution in water, have not influenced the hæmorrhage from the kidneys, but I seldom neglect to employ this remedy, deeming a longer clinical experience necessary before condemning it.

External Heat.—The maintenance of external heat is of prime importance. Fatal depression will follow neglect of this precaution. The capillary circulation is very sluggish, and the functions of the skin greatly impaired. Dry heat should be maintained by hot blankets and hot bottles, although the patient may declare that he is burning up. This part of the treatment is so obvious that it need not be dwelt upon, but merely add that a liberal quantity of crushed ice given from time to time will enable the patient to tolerate the irksomeness of it.

Alcoholics.—I have seen no good from alcoholics. Hot water is well borne by the stomach, produces a grateful stimulation, and with an occasional dose of carbonate of ammonia is far better than any form of alcohol.

Chlorate of Potash.—This remedy has been employed with success by several physicians. Quite recently, in the hands of Dr. D. S. Rhodes, of Pender county, it has given satisfactory results. My experience with it is small.

Position in hæmorrhagic fever should be strictly managed. The patient should not be allowed to attain the erect position, or even sit up in bed until convalescence has so far advanced that the heart's action is quite strong again. Death from heart-failure is a real danger threatening those who disregard this injunction. So few persons will use a bed-pan, that it is best to relieve the bladder night and morning by a catheter.

Convalescence.—The management of convalescence is to be conducted with great care. A ferruginous tonic with arsenic and nuxvomica should be continued for weeks, varying it from time to time, so that the patient will not be tempted to intermit his medicine. A change of air is very desirable and a good nutritious diet. Recurrences are so frequent in persons who have been attacked once, and the second and subsequent attacks are so much more dangerous by reason of the damaged constitution, that no efforts should be spared to see that the patient is fairly recovered before he incurs the risk of malarial influences again.

Prevention.—It is very certain that hæmorrhagic fever can be prevented. A person may live exposed to the intensest malaria and be enabled to escape it. The secret is plainly to apply the one safe and sure remedy—quinine—to the first occurrence of a chill. Once the spleen becomes enlarged, indurated and inflamed, the liver is almost surely hyperæmic, and the kidneys may at any time be involved. But enlargement of the spleen seldom takes place until the malarial influences are chronic, and, in fact, this is the test of malarial poisoning. Therefore the successful treatment of intermittent fever will almost always prevent hæmorrhagic fever, or if it does not prevent it the person falling a victim to the disease will offer a favorable prognosis.

The chief inducement which has led to the publication of this paper is rather to warn over-confident practitioners against too great trust in any remedy which has not the qualities of antagonizing malarial poison and of rapidly reducing temperature. If all the cases could be collected occurring during a season, it is highly probable that a large percentage of them would be found to have resulted fatally. The disease is eminently one in which prophylaxis promises success. The families under our medical advice and control should be instructed not to neglect chills, but have recourse to remedies and pursue them diligently until every symptom has disappeared.

THE USE OF POTASSII CHLORAS IN THE TREATMENT OF HÆMORRHAGIC MALARIAL FEVER.

By D. S. RHODES, M.D., Rocky Point, N. C.

The symptoms of this very malignant form of malarial fever are so familiar to the practising physician that I deem it unnecessary for me to mention them; therefore I will briefly refer to its pathology and give my experience relative to its treatment.

It is a popular idea that the principal morbid changes which take place in the course of this disease are of a splenic and hepatic origin. I admit that the spleen and liver are involved (as in all

forms of malarial fever), but I am of the opinion that the chief pathological feature (and that upon which depends the icteric hue of the skin) consists in disintegration of the red blood globules due to the effects of the malarial poison.

The blood, thus charged with effete matter resulting from the disintegration of its corpuscles, and being deprived of its oxygen faster than that element can be replaced by the natural forces, it is obvious that the treatment should consist in disinfecting the blood and imparting to it an additional supply of oxygen. To meet both of these indications, I prescribe the chlorate of potassium, notwithstanding Dr. Wood, in his work on materia medica, says the chlorate probably does not part with its oxygen to the blood at the temperature of the body; and the same author with Isambert and others, claim that when the salt is ingested it is eliminated unchanged. To sustain my own opinion, however, I will state the following facts:

On the night of September the 25th, 1882, I was called to my first case of this fever—a child about seven years of age. I found the patient vomiting frequently, the temperature at 105° , and on examining the urine to which my attention was called by the mother, I found it heavily charged with hæmatin, almost resembling pure blood.

The sulphate of quinia was administered, which, however, was not retained. I then advised that nothing more be given during the night except a little ice, as a means of allaying the vomiting. On my return the next morning I found the temperature had fallen a degree, the vomiting had ceased, the condition of the urine being the same. I then resumed my quinine, and added to my treatment the chlorate in five-grain doses every two hours. I made a visit in the evening, and to my surprise found the temperature at 99° and the urine normal in appearance.

The patient speedily convalesced, and in a few days was discharged. Since then I have treated five other cases with the same results. In two of these I used the chlorate alone, with the effects of arresting the vomiting and restoring the urine to its normal color in a few hours. In these last cases I used the quinine after the vomiting and other grave symptoms had subsided.

REST IN THE RECUMBENT POSTURE A VALUABLE ADJUNCT IN THE TREATMENT OF MANY DISEASES.

By J. W. LONG, M.D., Randleman, N. C.

I am actuated to write this paper by the fact that I see in the practice of those around me a lack of full appreciation of the benefits to be derived from rest in the recumbent posture strictly maintained throughout the course of treatment of many febrile and inflammatory diseases. Among the older physicians who went forth to battle long years ago and have not since removed their armor, the predominant ideas are to puke, purge and blister; overlooking the details and seemingly minor points, which have of late assumed so much importance, and recognizing, as every thinking physician must, the dire results of such a course, which is being pursued all around us, even in the latter days, I feel that the profession will pardon me for calling attention to this one point, than which there is nothing more important in many instances; and the wisdom of the profession of to-day in giving this matter so much attention, is being demonstrated on every hand.

Even some of those who went before and blazed the path for us to tread, did not fail to see the great necessity of absolute rest. Dr. Charles Meigs, of Jefferson fame, noticed that children with fever did much better when kept very quiet in bed; and others before and others after him testified to the same fact in both children and adults—clearly showing that there is a principle involved, which to violate incurs a penalty. For instance, it is very common, indeed, to hear a dysentric patient say, "Just as long as I can keep quiet my bowels don't move, but if I stir the least bit I have to get up."

And in this disease it is only in *imitation of nature* that we relieve the overloaded bowels and vascular system with *ipecac* or the *sulphates*, followed by *hypodermatic morphia* to *suspend peristaltic action*. At the meeting of the North Carolina Medical Association, which convened in Raleigh last May, I found the treatment of dysentery boiled down to one word—*rest*.

In typhoid fever a large per cent. of deaths which have their immediate cause in sudden failure of the heart, hemorrhage of the bowels and perforation, are the outcome of allowing the patient to

assume the upright position to take his food, medicine, go to sleep etc. It takes only a limited experience to prove this. Last year I was treating a little girl 12 years old with typhoid; three weeks after the fever left her she had a relapse; and one day, contrary to my orders, the nurse placed a chamber in the bed and helped the little patient over it to stool, when she immediately fell over in a spasm and died in a few minutes. This year I have lost only one typhoid patient out of a considerable number treated, and while that was from hemorrhage, it was one of those rare cases in which a hemorrhage occurs in the *first week*; and in this case continued to recur till the patient died. In the practice of one of my professional brethren (and I do not say it to his disparagement) two patients have died recently from hemorrhage, both of whom were allowed to get up to stool, one of them "filling the chamber half-full of blood," and another, from *perforation* brought on by getting up to have her bed stirred *after* the fever had all left her.

Nor are these isolated cases, for they are being repeated all around us—by those physicians who ignore the value of rest in the recumbent posture.

After labor the disposition is to get up too soon—because some old woman says, "Well, when my children were born I got up just whenever I got ready; I didn't lay in bed no two weeks"—and many of our physicians allow it, forgetful of the fact that herein lies a frequent cause of secondary hemorrhage, and is a prolific field for the gynecologist. Even in the puerperal diseases—as peritonitis, cellulitis, metritis, etc., we often overlook the fact that *rest*, unvarying and undisturbed, in the same unaltered position, is the grand principle by which every such case should be treated. Right along on this line Dr. Fordyce Barker says he has seen the symptoms of peritonitis renewed *after* they had been apparently subdued, simply from the maladroit efforts of the nurses to move the patient from one side of the bed to the other.

In a dilated heart (especially the left ventricle) or one threatened with dilatation, there is no law better established than that absolute rest in the recumbent posture is one of the best means to facilitate the growth of compensating hypertrophy, and we all know that without *compensation* the patient's chances are not flattering.

Now I have cited enough instances to show the vital importance of my subject, so let us see if there is any rational theory for the

practice which is here advocated. In the first place, the *heart is the great driving engine* in the body, being the chief agent in keeping up the circulation, and the *blood is the main factor in inflammation*. Remember these two facts, and we will proceed to discuss the diseases already mentioned in their respective order.

Dysentery is an inflammation of the mucous lining of the bowels, sometimes the deeper structures are involved, caused by some irritant, as fecal matter. The *irritation* induces *determination* of blood to the part, resulting in *congestion* and *stasis*, which are the essential steps in inflammation. Here the recumbent posture is especially valuable by *modifying the determination* of blood to the part, thus reducing the amount of inflammation. This is readily seen when we remember that the flood of blood to an irritated point is always greater when the part is lower than the general circulation—notably a contused foot; here the treatment is to elevate the foot *above* the body. So in dysentery, if the patient is allowed to raise up, the large amount of blood in the head, thoracic cavity and arms, as well as the heart, is *above* the irritated part, therefore the bad results.

Typhoid fever is decidedly an asthenic disease, the ulcers in the bowels and the strain upon the heart constituting the chief sources of anxiety. The upright position increasing the blood-pressure (as already explained) in the intestinal canal, augments the danger of one or more ulcers “tapping” a blood-vessel or perforating the coats of the intestine. The upright position also gives the heart a great deal more work to do, for it is far easier to drive the blood throughout the circulation when the head is on a level with the heart, than when it (the head) is much higher.

Perhaps some may say that the importance of the heart's work is magnified and more theoretical than practical; but if they will only remember that the heart propels blood, every 24 hours to the amount of 12,000 pounds, or over six and a half tons, their objections will vanish as the dew before the morning sun. This calculation is based on only 70 revolutions per minute; in disease the heart generally beats a great deal more frequently. There is yet another source of danger. We are taught to *economize the patient's strength*, because (debaring the dangers from intestinal lesions) it is simply a question of which will last the longer—the fever or the patient's strength. Now, every time the patient lifts his hand or raises his

head or his body, a certain amount of strength is wasted. At this rate the *nervous system soon becomes exhausted*, which is seen in low-muttering delirium, and finally by failure of the heart, suddenly or gradually, according to circumstances. So much for typhoid, and I want to add, by way of parenthesis, that all this is said with full knowledge of, and in full accord with, what Drs. Bartholow and Ringer say about high temperature in typhoid.

Labor is a physiological process, but one often attended by *pathological* features not pleasant to meet. It is readily seen how too early rising, or even getting up to stool, might cause secondary hemorrhage, especially so should there be retained a piece of placenta or blood-clot, or a laceration exist—by inducing a *determination* of blood to the parts. Even after the danger of hemorrhage is past, the erect posture causes a chronic congestion of the womb, arresting involution, which brings on a train of symptoms too numerous to mention. For the same reason the *puerperal inflammations* are often brought on, and *always aggravated* by getting up to stool, sitting up, etc., too soon.

In *heart disease* there is no emergency, but there is much to be gained by *rest in the recumbent posture*, and here I would like to refer the reader to Dr. Fothergill's article on "Some Remarks on Affections of the Heart," in the *Medical Record*, New York, July 5, 1884.

Now, gentlemen, I have but one suggestion to offer—the *physician is the autocrat in the sick room*; what you say your patient will do.

My paper is already too long, but I have spent much time and thought on the subject, and if my efforts result in saving only one life, I for one will feel amply repaid.

JUDICIAL decisions have been rendered in several different States to the effect that in cases where a physician or surgeon has recovered the amount of his bill by legal process, no suit for malpractice can be sustained, inasmuch as the result of the first proceeding forms a legal recognition of the value of his services.

A COUPLE OF DAYS IN THE PSYCHIATRICAL CLINIC OF DR. MENDEL, IN BERLIN.

By F. HERBERT HACKER, M.D., Charleston, S. C.

November 1, 1884.—Patient is exhibited; young man, some 30 years of age; married; rather slightly built, and with but little panniculus adiposus. Patient is employed in the Postoffice Department, and the examination is made to determine whether he is capable of being further employed in that capacity or whether he shall be pensioned. Patient has exhibited for sometime marks of absent-mindedness; endeavors at times, as his wife says, to eat out of empty plates, and makes frequent mistakes in his work. Patient exhibits slight paresis in the lower extremities, and is unable to answer simple questions from the multiplication table, etc. The diagnosis is made of *Paralysis progressiva vesanorum*. Prognosis infausta; death probable within three or four years.

Case of *Paralysis agitans* is also shown in an old woman 65 years of age. Attention is called to the extraordinarily characteristic gait and attitude of the patient and to the usual pen-writing position of fingers, as also to the phenomena of retro, latero and anteposition which patient exhibits, viz: on being pulled in either of these directions, i. e., backwards, sideways or forwards, patient is unable to stop the motion on removal of the hand causing this movement. Mendel advises hypodermic injection of strychnine, 0.03 ad. aq. 10.0, syringe full pro die, or solutio Fowleri—more recently, hyoseyamin (4 or 5 milligrammes prodosei) has been recommended. Paralysis agitans may continue for twenty or thirty years; its pathology is not known with certainty.

A case of *Tetania musculorum antibrachii sinistri* is next shown in a man 30 years of age. Patient had similar disease five years previously, caused, as he thinks, by exposure to cold, and which was cured by electricity. Patient has two attacks during clinic. The hand is strongly flexed and forearm tetanically convulsed. Attack last for three or four minutes. They commenced yesterday, and he has had up to the present time fourteen or fifteen. Trousseau's phenomena, i. e., production of an attack by pressure on artery or nerve, was not present, and is, indeed, frequently absent

in the initial stages. Prognosis optima—Ordo: Galvanic current anode to affected muscles kathode on sternum.

November 3.—Patient is presented with the peculiar variety of insanity called by Mendel *paranoia persecutoria*. Patient, middle-aged woman, imagines that the persons in her house are following her all the time in order to kill her. She has complained several times to the police, and affirms now her intention of going to the Chancellor and to the Emperor in order to have her supposed wrongs looked into. She thinks their indifference arises from some secret interest they have in her, and that she is in all probability a disguised princess. (*Délire de grandeur*.) Besides this, she has hallucinations of all her senses, sees strange figures and men looking in the window at her, hears people running over the roof of her house all night, and suffers from a number of subjective odors, among which that of burnt coffee is predominant—describes the odors, on the whole, as being rather agreeable than otherwise. Patients with this affection are harmless, except in so far as their fears as to their personal safety may at times prompt them to acts of violence against others.

The disease is a chronic one and utterly incurable. Beyond the peculiar hallucinations and delusions from which these patients suffer, they enjoy a remarkable degree of intelligence, and can converse quite reasonably on other subjects. It is, however, impossible to convince them of their error.

A young woman some thirty years of age is then presented, suffering from what Mendel calls *Paranoia hypochondrica chronica*. Sometime back patient had an operation performed on her collum uteri, of what nature she is not aware, and immediately afterwards her present condition developed itself, though patient acknowledges to have always been of an excitable and nervous disposition. She imagines herself to be fearfully sick, that she is going to die, constantly reproaches herself with neglect of her domestic duties, and is easily brought to tears. Mendel warns against the prevalent belief that hysteria and similar conditions are always dependent on some affection of the generative apparatus, and maintains that he has frequently seen such operations immediately followed by an outbreak of this or some other nervous affection.

Mendel advises strongly against the prevalent system of treating these patients by trying to divert their attention by all sorts of

amusements, theatres, travelling, and so forth. He has never seen any good result from such treatment. Rest, in his opinion, is absolutely necessary.

These cases, such as the one presented, give a tolerably good prognosis, and are best treated with small doses of morphia. There is no danger of the patients acquiring the morphia habit, as they soon learn to dispense with the drug on being relieved of their troubles.

REVIEWS AND BOOK NOTICES.

A HANDBOOK OF THE DISEASES OF THE EYE AND THEIR TREATMENT. By HENRY R. SWANZY, A.M., M.B., F.R.C.S.I. With Illustrations. New York: D. Appleton & Co., 1, 3 & 5 Bond Street. 1884. Pp. 437. 8vo. Muslin.

"The design of a handbook should be," the author says, "to set forth the general feeling of the day upon the subject treated of, rather than to serve as a medium for the publication of the special views of the author," and upon this principle he has written a book representing the advance position of practical ophthalmology, which will be prized, not only by the "students attending on an Ophthalmic Hospital," but for those who have "ceased to be students in name."

The chapter on Elementary Optics is short and clear and well illustrated, condensing successfully this branch of physics admirably for the student who has the necessary preliminary teaching. The second chapter, on Abnormal Refraction, does not presuppose a knowledge of the subject, and gives in plain and concise language a definition and description of hypermetropia, myopia, astigmatism and presbyopia. This is followed by a very satisfactory chapter on the Ophthalmoscope, with a description of the normal fundus oculi. These preliminary chapters are well illustrated by diagrams, and as clearly set forth the principles of practice as it is possible to do in such a limited space, and, indeed, the essential elements are as comprehensively taught as need be for the general practitioner.

The remainder of the book devoted to diseases of the eye is ad-

mirable, and it is especially evinced in the chapter on the "Motions of the Eye-balls and their Derangements." The mechanism of normal and abnormal muscle action, the diagnostic methods for detecting strabismus, and the operative procedure to rectify it, are so plainly set forth that the "country doctor" who fails to make a satisfactory diagnosis in these cases would be—shall we say—stupid, indeed.

In these days, when all of us engaged in general practice are greatly relieved to know that we can send our cases to that most skilled of all the class of specialists—the ophthalmic surgeon, we are not to err in not attentively studying our eye cases, and so give them all the advantage of such early preliminary treatment as will save the eye, in acute destructive diseases, from damage. The general practitioner need not plead a lack of diagnostic knowledge if he will but master a work as skilfully and plainly written as this, and, indeed, he will find that he will be enabled to give relief to very many of that poor unfortunate class—by far the majority of a Southern clientele—who cannot make long journeys to a specialist; and, furthermore, it will enable him to prepare his case for the specialist in a way that will materially aid him in after treatment.

The work is beautifully printed and illustrated, and is the one, so far as we are able to judge, to put in one's library, if it must be limited to one book on diseases of the eye.

A TREATISE ON MASSAGE—ITS HISTORY, MODE OF APPLICATION AND EFFECTS, etc. By DOUGLAS GRAHAM, M.D., Fellow of Massachusetts Medical Society. New York: William Wood & Co. Pp. 286. Cloth, \$2.50.

At no time since Long set forth the proofs of his ability to cure certain forms of disease by the method known as the "Swedish Movement Cure," has there been an entire disbelief in the great value of *Massage* in promoting the activity of function in any portion of the body that can be reached by the expert in this art. The work under notice is the exposition of the method of the author for the application of this form of treatment. A clear statement of the mode of using massage, its different forms, its indications and contra-indications, has been needed since the utility of the treatment by manipulation has been recognized, and in the treatise before us all of these requirements are answered. To this the author has

added a pleasant notice of the growth of the system, and all the different ways of alleviating suffering, overcoming fatigue and restoring the usefulness of disordered organs by massageurs among the rude savage as well as those of civilized nations.

The careful student will find much to interest and benefit him in this work, and it will be of great service now, as the best digested treatise on this subject now extant, as far as we know.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR, INCLUDING A SKETCH OF AURAL ANATOMY AND PHYSIOLOGY. By D. B. ST. JOHN ROOSA, M.D., LL.D. New York: William Wood & Co., 56 & 58 La Fayette Place. Pp. 718. Cloth, \$5.50.

The great importance of a thorough knowledge of the diseases of the ear has stimulated the specialists in this department to such zealous search, that out of the constantly increasing and well studied materials, the subject is approaching at least a stage that, from regular treatises and shorter manuals, the general practitioner can now gain the information that he so often stands in need of when too far removed from a specialist to whose care he can immediately commend his suffering patient. No more intelligent and faithful student and ready writer has entered into the work of systematizing the work of this specialty than our author, and we welcome this last edition of his treatise as further evidence of his careful writing and his painstaking elaboration of the increased knowledge received not alone from the experience of others, but from his own large practice, both in hospitals and in private.

The established reputation of the author makes extensive comment on his work unnecessary, and we heartily commend the book to the student as well as the general practitioner—a book full of the best information in all matters pertaining to Otology, set out in good form and issued with that especial mark of a general reference book, a good index,

-76, Dec
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THE STORY OF MY LIFE. By J. MARION SIMS, M.D., LL.D. Edited by his son, H. Marion Sims, M.D. New York: D. Appleton & Co., 1, 3 & 5 Bond Street. 1884. Pp. 471.

Everybody will be glad to know that Dr. Marion Sims has given us a glimpse of his inner life. It is not very unlike the life of most other who have been eminent in medicine, except that it is simple and

unaffected. According to Dr. Sims' story we learn that he had no particular taste for the study of medicine, and in all his career as a student he was most diligent as a dissector. When he was a second year's student he nursed a case of small-pox without ever suspecting the nature of the disease. He was dull and unambitious until he reached a point in his life when some surgical successes inspired his zeal, and then the latent genius of the man burst forth in unquenchable ardor. If, like the present writer, one sits down to this story of Dr. Sims' life with the enthusiasm and admiration which his achieved success inspired, he will irresistably be held in absorbed interest until he has read every line of it.

We read of his college career pursued in the most mediocre scholarship; his manly ideas in opposition to the brutal sin of duelling; his plodding assiduity in the dissecting room; his frank opinions of his early day friends; his courtship; his struggles with poverty and against the (almost) crime of being a young doctor; the sad and almost hopeless days of sicknesses and relapses; the all-absorbing self-satisfaction when his first successes were achieved by means of the silver suture; his first advent and experimental life in New York city, with all its cruel and crushing opposition from the great surgeons of the day, where a struggle with poverty almost snapped the slender thread of life; the timely aid of his friend Henri Stuart; the foundation of the Woman's Hospital with all the triumph over powerful opposition which it necessarily carried with it; the developing power which enabled him to win friends and lay deep the foundation of this work; his successes in Ireland and Scotland, France and Belgium. We read of all "this crowded and glorious life" with thankfulness that it befel the part of the nineteenth century in which we saw the light to be blest with the achievement of Marion Sims, that he was an American citizen, that he was the child of our own sunny South, a son of our sister Carolina.

It will be good and profitable reading to the profession (and we say this in the very selfish interests of medical journalism) to read the account of the birth of Dr. Sims' first contribution to a public journal. If most of our readers will study the process of development of this case—p. 211 et supra—(a case of horribly deforming hare-lip in the person of a lady), study the whole-souled interest which he took in it, the triumph of the reparative process, and the crowning cosmetic effects of a plate of artificial teeth, he will enjoy every word of the

inward satisfaction he expressed in being able to restore an afflicted woman to society. As the reader gets farther on and notes with what shy diffidence he receives the suggestion of an eminent dentist to report his case to a dental journal; how doubtfully he scanned the printed pages when the article first appeared, and how relieved he was that it was in a journal which would probably be read by none of his colleagues; how he hid the only copy of the journal containing the article behind the books in his little library, where it was afterwards accidentally discovered by a hypercritical friend—Dr. Ames—and cordially praised by him, it will bring to mind the struggles which many of our young friends in North Carolina have experienced, but which few could so well describe as Dr. Sims. There are young men in our State who are just now going through this stage of struggle against diffidence in literary effort, which, if they have the courage to overcome, will redound to their credit and that of the medical journals; we do not presume to imply that the converse is not also true.

But what need we say more about this fascinating story of the early struggles of a great man! Everybody will read it, and if it does not stir up the ardor of the veriest dullard, it is useless to arrange with a more masterly touch the drama of a glorious life for him.

We will be pardoned for suggesting the correction of small, but glaring errors we have found, and we do it because we believe that the editor will appreciate our motive.

On page 105, tenth line from the top, *solidarity* is erroneously used for (perhaps) *solidity*. On page 208 the name of Dr. *Boling*, of Montgomery, is repeatedly misspelled *Bowling*. On page 244 Dr. Mettaer's name is spelled *Meltor*. On page 308 *Christison* is incorrectly spelled *Chrisleston*. On page 312 *Jobard de Lamballe* is spelled *Joubard*, and many times repeated.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

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THE MANAGEMENT OF MALARIAL ECLAMPSIA IN CHILDREN.

We have taken occasion before to refer to this subject. We refer to it again, because of the great fatality of neglected cases. Statistics are not available to show the ratio of deaths to children attacked, but an extensive observation satisfies us that it is very great.

First, what are the signs of malarial convulsions? This question must be settled at once and promptly at the bed-side. To mistake it for reflex convulsions, and wait for the action of an emetic or purgative, would probably be to lose the life of the patient. Neither would it be wise to infer a profound disease of the brain

because there is not a prompt return to consciousness after each eclamptic seizure. The victim of malarial eclampsia has always a prodromatous fever of high intensity. The thermometer will, in the severest cases, reach 107° F. in the rectum. The skin has a peculiar dusky pallor, quite pronounced in brunettes, but distinct in fair children. There is almost always some degree of stupor and restlessness. The child jabbers a repetition of the same meaningless word at short intervals, and snaps its lips in a peculiar way as it tosses the head about. Reflex action is nearly abolished, except for the more sensitive parts of the body. The eyes are heavy and expressionless, and the pupils usually contracted. The season of the year would be a valuable indication as to the nature of such a case, and all cases occurring in the fall months should be suspected of having their origin in profound malarial poisoning. Clearly, then, the temperature should be taken at once, and, preferably in the rectum, because of the danger of having the thermometer bitten, or getting only an approximate result by the mouth; and because the registration of the temperature by the rectum is more speedy. One degree, though, should be deducted for the difference between the registration at the mouth or axilla.

The surface temperature is so unreliable in such cases as to be notoriously misleading. The child may be bedewed with sweat and still have a dangerous degree of fever. After all, then, the recognition of malarial eclampsia is so demonstrable by means of the thermometer, that the doctor who sees a case of convulsions in a child during the period of the prevalence of malaria, seriously neglects his duty if he does not apply this test at once.

The cause of eclampsia in these cases is the excessive high temperature superadded to the specific poison of malaria—for the two elements may and do exist separately, and when conjoined are doubly dangerous. In no disease except measles will the temperature attain such a degree as in that profound condition known as pernicious fever, and in none can it be so certainly lowered by remedial measures.

That no time be lost, while the prescriptions are being compounded, resort to ice-water enemata should be at once directed. The bowel should be filled with water by means of a syringe of the Davidson pattern, until it returns very little warmer than when injected, as the internal temperature is almost surely several degrees

higher than at the surface—the disparity is far more apparent than in other severe fevers. The temporary reduction of temperature by this means serves to mitigate the danger, and is also to rid the bowel of faecal matter, and render it more tolerant of quinine should it be determined to administer it by the rectum.

A sufficient experience has shown that the oleate of quinine is quite as serviceable as the most sanguine could desire it.*

ORGANIZATION OF THE STATE AND MUNICIPAL HEALTH BODIES OF THE UNITED STATES AND CANADA TO RESIST THE CHOLERA AND OTHER PESTILENTIAL DISEASES—A NEW NATIONAL BOARD OF HEALTH.

The almost certain approach of the cholera to America next year has been the cause of earnest solicitude to those officers entrusted with the management of State and municipal boards of health, as well as to the people at large. Looking the situation squarely in the face, it was so apparent that nothing could be done without organization of a more thorough kind than any now existing, that a number of sanitarians composing the Public Health Section of the American Medical Association, and several from the American Public Health Association, organized what is now known by the modest title of *The Conference of State Boards of Health*, as follows:

Dr. J. A. Dibrell, Jr., Arkansas State Board of Health.

Dr. C. A. Lindsley, Connecticut State Board of Health.

Dr. John H. Rauch, Illinois State Board of Health.

Dr. W. S. Robertson, Iowa State Board of Health.

Drs. Pinckney Thompson, R. W. Dunlap, J. I. McReynolds and J. N. McCormack, Kentucky State Board of Health.

Drs. Joseph Holt, S. S. Herrick and L. F. Salomon, Louisiana State Board of Health.

Dr. C. W. Chancellor, Maryland State Board of Health.

Dr. J. A. Steuart, Health Officer, Baltimore.

* The excessive price which was formerly an obstacle to its use, has been considerably reduced

Drs. H. P. Walcott and S. W. Abbott, Massachusetts State Board of Health.

Dr. S. H. Durgin, Boston Board of Health.

Drs. D. W. Hand, W. H. Leonard and C. N. Hewitt, Minnesota State Board of Health.

Dr. Henry B. Baker, Michigan State Board of Health.

Drs. E. H. Gregory, J. C. Hearne, H. F. Hereford, Albert Merrill, G. F. Bartlett, G. M. Cox and W. B. Conery, Missouri State Board of Health.

Drs. Irving A. Watson and J. P. Conn, New Hampshire State Board of Health.

Dr. Ezra M. Hunt, New Jersey State Board of Health.

Hon. Erastus Brooks, New York State Board of Health.

Dr. Thomas F. Wood, Secretary North Carolina Board of Health.

Dr. Charles H. Fisher, Rhode Island State Board of Health.

Dr. Thomas G. Simons, South Carolina State Board of Health.

Drs. G. B. Thornton and J. Berrien Lindsley, Tennessee State Board of Health.

Hon. David P. Hadden, Memphis Board of Health.

Dr. R. M. Swearingen, Health Officer, Texas.

Dr. James E. Reeves, West Virginia State Board of Health.

Drs. S. C. Johnston, J. T. Reeve and B. O. Reynolds, Wisconsin State Board of Health.

The meeting of organization was effected in May, 1884, in Washington, and subsequently in St. Louis, October 13th, 1884, at the same time of meeting of the American Public Health Association, by previous arrangement, Dr. John H. Rauch, of Illinois, read a paper on "*The Threatened Extension of the Asiatic Cholera to North America, and the Action Necessary to Prevent or Limit a Cholera Epidemic.*" This paper was discussed by the Conference, and supplemented by one from the pen of Dr. Henry B. Baker, of Lansing, Michigan, on the "*Practical Work Required for the Prevention of Cholera in this Country.*" These papers formally set on foot the subsequent action of the Conference, and pursuant to the call of the President, Hon. Erastus Brooks, of the New York Board of Health, and the Secretary, Dr. J. N. McCormack, of Kentucky, a meeting of the Conference took place in the Ebbitt House, on the 10th of December.

"The opening address was made by President Brooks, who briefly stated the object of the meeting to be the consideration of two subjects

of great public import—the sanitary condition and operations in the States and among the people represented by the delegates, and to discuss the apprehended and generally expected appearance of the cholera in this country in the early part of 1885. He described the progress of the disease in Europe during the present year, and in New Orleans during the early part of this century, where over 50,000 deaths were reported between the years 1832-'55. He dwelt upon the necessity of government aid in repressing and confining the ravages of the dread disease by wise health laws, and concluded by saying that an administration which would be of use requires capable persons, constant vigilance, complete material and equipments, and willing obedience to wise authority."

It was found after registration was completed that the following gentlemen were present, representing the State and cities as given below :

Drs. C. A. Lindsley, New Haven, Conn. ; J. F. McFarland, Savannah, Ga. ; J. H. Rauch, Chicago, Ill. ; E. S. Elder, Indianapolis, Ind. ; J. N. McCormack and Breyfogle, Ky. ; S. S. Herrick, New Orleans, La., and S. R. Oliphant, Shreveport, La. ; J. A. Steuart, Baltimore city, and C. W. Chancellor, Maryland ; S. H. Durgan, Boston, Mass. ; A. F. Holt, Cambridge, Mass. ; H. P. Walcott and S. W. Abbott, Massachusetts ; H. B. Baker, Detroit, Mich. ; Chas. A. Hewitt, St. Paul, Minn. ; Joseph Spiegelhalter, St. Louis, Mo. ; J. N. Jackson, Kansas City, Mo. ; J. C. Crane, Nebraska ; Irving A. Watson, New Hampshire ; E. M. Hunt, New Jersey ; W. M. Smith and Erastus Brooks, New York State ; J. H. Raymond, Brooklyn ; A. C. Mercey, Syracuse, N. Y. ; Thomas F. Wood, North Carolina ; C. W. Rowland, Cincinnati, Ohio ; A. H. Iddings, Dayton, Ohio ; Crosley Gray, Pittsburg, Pa. ; E. W. Germer, Erie, Pa. ; J. Ford Priolean and H. B. Horlbeck, Charleston, S. C. ; G. B. Thornton, Nashville, Tenn. ; J. B. Lindsley, Memphis, Tenn. ; Charles Mitchell, Chattanooga, Tenn. ; William Penny, Galveston, Texas ; J. E. Reeves, West Virginia ; T. A. Harris, Parkersburg, W. V. ; J. L. Reeve, Wisconsin ; Smith Townsend, Washington, D. C. ; A. B. LaRoyne, Montreal, Canada ; D. Montizambert, Dominion of Canada ; C. W. Covernton, Provincial Board of Ontario ; Dr. J. G. Cabell, Richmond, Va.

Upon motion of Dr. H. P. Walcott, of Boston, three committees were appointed : (1) On Federal Legislation. (2) On State Ac-

tion. (3) On Municipal Action, to prevent the introduction and spread of cholera into the United States.

The following committees were named by the chair :

On Federal Legislation.—Drs. Walcott, Smith, Rauch, Herrick, Baker, Brooks and McCormack.

On State Action.—Drs. Watson, Hewitt, J. B. Lindsley, Hearne, Hunt, and Covernton, of Toronto.

On Municipal Action.—Drs. Raymond, McFarland, Breyfogle, Durgan, and Mr. Rowland.

Dr. W. M. Smith, Health Officer of the City of New York, read a paper "*On Quarantine and Maritime Sanitary Regulations*," setting forth the failure of the regulations now in force to prevent the introduction of contagious diseases into this country. The owners of passenger vessels not being citizens of this country, are, as a rule, indifferent to the dangers of bringing infectious diseases into this country. He referred to the lack of organization of the medical service of ocean steamers, the sometimes criminal arrangement for the separation of small-pox patients from the well passengers, the inexperience of the young medical men generally filling the positions as surgeons (the poor pay offered accounting for the inability of their medical men), and, in short, gave a chapter from the experience of the New York port, sufficient to convince anyone, if need be, that there were many improvements necessary to be made before the dangers attending this passenger traffic could be overcome. This paper will be printed elsewhere.

The Conference, by appointment, had an audience with President Arthur and Secretary Frelinghuysen, at the White House.

Mr. Brooks explained that the objects of the meeting of the Conference in Washington was to digest methods for the prevention of cholera, and that the gentlemen composing the body were practical sanitarians from twenty-four States of the Union, and three from the Dominion of Canada. They hoped to present their views to Congress as soon as they had sufficiently considered them, and trusted that the President would favor the purposes they had in view. The President and Secretary expressed their interest in the movement, and promised every assistance in their power.

The afternoon session was begun by the reading of the report, in part, of Dr. George M. Sternberg, from the committee appointed at St. Louis, on "Disinfectants." This committee was divided into

two sub-committees—one on the experiments on the comparative value of disinfectants, and the other upon their practical values. The former were entirely of a biological character. Dr. Sternberg reported on the biological side of the question.

The investigation was set on foot at the October (1884) meeting of the American Public Health Association, and received contributions from a patriotic citizen of St. Louis, and from several of the Boards of Health. The work is still in progress, and is being conducted by Dr. Sternberg, at the Johns Hopkins University.

The afternoon session of the first day, and the morning session of the second day were devoted to the reports, verbal and written, of the various State and municipal boards of health, taken in alphabetical order. Much instructive material was in this way brought before the Conference, enabling those present to form an estimate of the sort of preparation which had been made all over the country for the restriction of cholera. The following are the reports of the committees :

WHAT THE "CONFERENCE OF STATE BOARDS OF HEALTH" DID TO
PREPARE THE COUNTRY AGAINST THE INVASION OF CHOLERA.

A special adjourned meeting of the "Conference of State Boards of Health" met in Washington, D. C., on the 10th of December, 1884, to digest plans for the prevention of the importation of cholera, and for the organization of plans for its mitigation if unfortunately introduced. This body was representative, including twenty-four States and as many cities, and the Canadian provinces on our northern border.

After the appointment of the several committees the Conference devoted its first sessions to a recital by the executive officers of the various boards, State and municipal, on the plan of their organization, and the means at their command to resist the introduction of cholera.

The Committee on Municipal Action made the following very practical suggestions :

"Your Committee on Municipal Action beg leave to make the following report :

"1st. That all the surface wells should be closed at the earliest possible moment, and that great care should be taken that the water supply of all cities, towns and villages should be of undoubted purity.

"2d. That all privy vaults should be abolished wherever water-closets can be supplied, and that wherever the existence of such vaults is necessary that they should be rendered water-tight in such a manner as to prevent the saturation, not only of the ground surrounding them, but also of the materials of which they are built, and that the contents of such vaults should be kept constantly disinfected and removed to a proper place at frequent intervals.

"3d. That all stagnant pools should, when practicable, be disinfected, and when possible the water removed by drainage or pumping, and the further accumulation prevented by filling with fresh earth or other material free from garbage or other filth.

"4th. That great care should be exercised to keep at all times clear and free from obstruction all sewers into which passes the refuse from dwellings, factories and other buildings, and that such examinations should be made as will detect imperfect plumbing in all buildings and the defects immediately corrected. In this connection special attention is directed to the necessity for the thorough ventilation of all soil and waste-pipes, and to the dangers connected with untrapped and unflushed soil-waste and overflow pipes.

"5th. That extraordinary care should be exercised in reference to all tenement houses, lodging-houses, and, in general, all places where large numbers of human beings congregate, that no accumulation of garbage or other filth be permitted in cellars or yards, and that frequent and thorough cleaning and whitewashing of such structures be required; and that householders should frequently and thoroughly examine their yards, cellars and closets and other out of the way places, to see that no other filth of any kind has been deposited there.

"6th. That the food supply be vigorously watched to exclude from the market all unwholesome meat, all milk adulterated or from diseased animals, and all unripe fruits and vegetables, and that cow-stables be kept at all times clean, well whitewashed and free from all excremental accumulations.

"7th. That all garbage, kitchen and household refuse, should be promptly removed from dwellings, stores and other buildings, to a proper place, where it may be destroyed by fire, or otherwise disposed of in such manner as to occasion no nuisance.

"8th. That such material should never be used in the filling of lots or disposed of by throwing the same in streets or vacant

property where it may decompose and exhale offensive and deleterious gases.

"9th. That the attention of the authorities of all institutions, both public and private, and of individuals as well, be drawn to the great importance of maintaining a habit of personal cleanliness in persons under their charge, as being one of the most efficient means of warding off an attack of cholera, or, if it has once appeared, of greatly reducing its virulence and fatality.

"10th. Should the cholera appear in any place in this country the health authorities of the place should have immediate notice of the first cases in order that prompt action may be taken for complete isolation and disinfection.

"11th. That all authorities of States, cities or villages be urged to adopt measures which will result in the amelioration of all conditions such as have been referred to in the foregoing propositions, with the warning that in the opinion of this Conference such conditions, if permitted to continue, will greatly promote the spread of cholera when it comes, and with the assurance that, if requisite, measures are promptly taken to remove them, the disease will be less likely to attack, and a community will be better able to cope with the disease and to reduce its ravages to a minimum.

Respectfully submitted,

E. MONTIZAMBERT, D.D.,

WM. L. BREYFOGLE, MD.,

SAMUEL H. DURGAN, M.D.,

C. W. ROWLAND,

J. T. MCFARLAND, M.D.,

JAS. SPIEGELHALTER, M.D.,

J. H. RAYMOND, M.D., Chairman.

Washington, D. C., November 11, 1884.

The Committee on State Action reported as follows :

"That the laws under which State Boards of Health and the municipalities in the several States are established are so diverse that it is impossible to formulate any method of uniform action except in a few particulars. It is conceded that the most thorough and scrupulous enforcement of all the details of cleanliness as to all persons and all surroundings is at the basis of the preparations to be made by States and by individuals. Coequal in importance with this is the provision of methods by which to keep a disease from

being brought into any State. This necessarily divides itself into that which relates to maritime commerce and that which relates to intercourse between one State and another. As at present our dependence for formal protection is chiefly that furnished by the State authorities, it can only be claimed that each State should be made fully aware of what protection is afforded by the ports through which the vessels pass on approach to their own waters, and should be careful to add such additional details of examination as they may deem necessary. In reference to inter-State communication it is essential that officers of State and municipal boards in adjacent States should fully notify each other if any case of cholera occurs in its own domain, and give such other information as may be precautionary. It is essential that each local board in each State should in advance determine with precision what it will do with any first cases that occur, and so provide as to conveyance, hospitals, refuge stations, furnishing medicine, etc., so that valuable time shall not be lost and that the cholera gain no foothold.

“In our judgment the time has come when the State boards of health of those States that have such organization, and the chief municipal health boards of those States having no State boards, should be recognized by the General Government as having authority to compel such sanitary measures—national, international, maritime and inter-State—as are necessary, and to be able to secure their execution through those departments of the General Government under which they should naturally fall.

“*Resolved*, That in order to secure efficient local boards in States, and the coöperation of the various States, State boards of health should be promptly organized in all the States not yet having such boards.

“*Resolved*, That, in addition to the usual appropriations needed for the continuous work of State boards, State, municipal and local boards should have contingent appropriations for the exigencies of cholera epidemics.

EZRA M. HUNT, M.D.,
IRVING A. WATSON, M.D.,
J. C. HEARNE, M.D.,
C. S. HEWITT, M.D.,
J. B. THORNTON, M.D.,
Committee.”

The report of the Committee on Federal Legislation was made in outline, setting forth a plan for the enactment of a revision of the law creating the National Board of Health.

Upon the motion of Dr. Chancellor five other members were added to this Committee, viz: Drs. C. W. Chancellor, J. C. Hearne, Thomas F. Wood, E. S. Elder and J. B. Thornton.

The Conference adjourned after having delegated authority to this Committee of ten. The bill which was prepared by this Committee is as follows:

“A BILL

“To amend an Act entitled ‘An act to prevent the introduction of contagious and infectious diseases into the United States and to establish a National Board of Health.’

“Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That an Act entitled ‘An act to prevent the introduction of contagious and infectious diseases into the United States and to establish a National Board of Health,’ approved March 3, 1879, be so amended as to provide that there shall be established a National Board of Health, to consist of one member from each State Board of Health now established, or which may be hereafter established in the United States, to be appointed by the President and confirmed by the Senate, whose compensation, when actually engaged in the performance of duty under this act, shall be ten dollars per diem each, and reasonable expenses. This board shall meet in Washington within ninety days after the passage of this Act, and shall meet in Washington annually, and in case of emergency upon the call of its Chairman and Secretary, or upon the extraordinary call of the President of the United States, as hereinafter provided.

“The officers of this Board shall be a Chairman and Secretary. The Secretary shall be the executive officer of and ex-officio a member of the Board, and shall devote his entire time to the duties of the office, and may be removed for cause, at any regular meeting of the Board, two-thirds of the full Board voting therefor, and shall receive such salary as may be determined by the Board. The Chairman, with six other members, representing the various geographical divisions of the country, shall constitute the Executive Committee of the Board, to be elected at the first meeting of the Board, and at each annual meeting thereafter, and said committee shall, and is hereby authorized to exercise such powers as may from time to time be conferred upon it by the Board.

“SECTION 2. The duties of this Board shall be, and it is hereby authorized and given power to make, or cause to be made, such investigations at any place within the United States, or at any foreign port or place, and to collect information upon all matters relating to the public health, and to frame such rules and regulations as may

be necessary for the government of the quarantine service of the United States; and all the power and authority now provided by law, or which may be provided by law, for the control and protection of the public health of the United States, shall be and are hereby vested in said Board, except as to the special authority vested in the President of the United States under the provisions of this act. The rules and regulations of this Board shall severally be executed, under the direction of this Board, by such Departments of the Government, or other officers, as the law may prescribe or the President designate.

"This Board shall coöperate with, and so far as it lawfully may, shall aid State and local boards of health in the enforcement of the rules and regulations of such boards, to prevent the introduction of contagious and infectious diseases from foreign countries into the United States, and into one State from another, and at such ports and places within the United States as have no adequate quarantine regulations under State authority, necessary to prevent the introduction of contagious and infectious diseases into the United States from foreign countries or into one State from another, this Board shall, when necessary for the protection of the public health, report the facts to the President of the United States, who shall, if in his judgment it is necessary, direct this Board to make such rules as are necessary to protect the public health, which, when so made and approved by the President, shall be promulgated by this Board and enforced by the sanitary authorities of the State, where the State authorities will undertake to enforce the same; but if the State authorities shall refuse or fail to enforce such rules and regulations, the President may appoint a proper person or persons for such purpose, to act under the direction of this Board.

"SECTION 3. It shall be the duty of this Board to make such rules and regulations as are necessary to be observed by vessels at ports of departure, where such vessels sail from any foreign port or place to any port or place in the United States, to secure the best sanitary condition of such vessel, her cargo, passengers and crew, and to prepare from time to time for the consular officers of the United States, and for the medical officers serving under this act at any foreign port, and otherwise make publicly known such rules and regulations, which, when approved by the President and issued by the Department of State, and posted in the office of the Consul or other representatives of the United States at such foreign ports for at least ten days, shall be enforced by the consular officers and agents of the United States.

"SECTION 4. It shall be unlawful for any vessel from any foreign port or place to enter any port in the United States, except in accordance with the rules and regulations made in pursuance of this act, and of the rules and regulations made under State or municipal authority, and any such vessel which shall attempt to enter any port of the United States in violation thereof, shall be liable to process in the proper District Court of the United States, and upon

conviction shall forfeit to the United States a sum to be awarded in the discretion of the court, not exceeding \$1,000, which shall be a lien upon such vessel, to be recovered upon proceeding in the proper District Court of the United States, in accordance with the rules and laws governing cases of seizure of vessels for violation of the revenue laws, and in all such cases the United States attorney for such district shall appear on behalf of the United States; and all such vessels shall obtain from the consular or authorized medical officer at the port of departure, a certificate in duplicate, setting forth the sanitary history of said vessel, and that it has in all respects complied with the rules and regulations of this Board, made in pursuance of this act for the government of such vessels, and before granting such certificate such consular or medical officer is required to be satisfied that the statements therein made are true; and, upon the request of this Board, the President of the United States is hereby authorized to appoint proper medical officers to serve in the offices of the consuls at any such foreign ports, to make the inspections and give the certificates herein required.

SECTION 5. Such vessels shall observe all rules and regulations made by this Board in pursuance of this act, in regard to the inspection, disinfection and isolation of the same, upon its arrival at any port in the United States, and for the treatment of persons and cargo on board, so as to prevent the introduction of contagious diseases into the United States, and it shall be unlawful for any vessel to enter such port, to land its passengers or discharge its cargo except upon a certificate from the health officer of such port, that such rules and rules and regulations have in all respects been complied with.

SECTION 6. In the event of any sudden emergency, threatening the importation of contagious or infectious diseases into the United States from any foreign country, the President of the United States is hereby authorized and required, in his discretion, to adopt and make known forthwith by public proclamation such measures as may meet the emergency, either by suspending the introduction into the United States, by land or sea, of any specified merchandise calculated to be a vehicle for the communication of contagion, or by prohibiting the entry into the ports of the United States of vessels coming from infected countries or having contagious or infectious diseases on board. And in case the President shall at any time exercise the authority hereby conferred upon him, he shall, at or before the time of issuing such proclamation as aforesaid, convene the National Board of Health, to meet at Washington in special session within ten days from the date of such notice of convention, and the said Board shall thereupon advise such measures as it may deem sufficient to meet the emergency; and upon the taking effect of such measures, with the approval of the President of the United States as herein provided, the President's proclamation aforesaid shall cease to have effect. It shall be the duty of this Board at all times to give prompt attention to any question in sanitary science which may be submitted to it by the President.

SECTION 7. It shall be the duty of the Department of State to obtain from the consular officers at foreign ports or places all available information in regard to the sanitary condition of such ports and places, and to transmit the same to this Board ; and it shall be the duty of this Board to obtain from the State and municipal health authorities throughout the United States, and from all other available sources, weekly reports of the sanitary condition of ports and places within the United States, and reports and other matters relating to climatic and other conditions affecting the public health, and it shall prepare, publish and transmit to State and other authorities, and other proper persons, weekly abstracts of such reports, consular reports, and other useful information relating to the public health ; and it shall make to the President, for transmission to Congress, an annual report of its transactions, with such recommendations as it may deem important to the public health ; and the necessary printing of the Board shall be done at the Government Printing Office, upon the requisition of the Secretary of such Board, in the same manner and subject to the same provisions as other public printing for the several Departments of the Government.

SECTION 8. The President of the United States is authorized, when requested by this Board, and when the same can be done without prejudice to the public service, to detail officers from the several Departments of the Government, for temporary duty to act under the direction of this Board in carrying out the provisions of this act, and such officers shall receive no additional compensation, except for actual and necessary expenses incurred in the performance of such duties.

SECTION 9. To meet the expenses incurred in carrying out the provisions of this act, the sum of five hundred thousand dollars, or so much thereof as may be necessary, is hereby appropriated, to be disbursed under the direction of the Board ; and the Board shall have authority to appoint such disbursing agents as it seems necessary, who shall give bond as in other cases, for the faithful performance of their duties.

SECTION 10. All acts and parts of acts in conflict with any of the provisions of this act shall be, and are hereby, repealed.

The copy of the bill was presented and explained to the House Committee on Public Health, and to the proper Senate Committee for their action.

Whatever may be the fate of this bill, it has the merit of reconciling many of the conflicting elements heretofore so destructively antagonistic, and should it fail to become a law, it is safe to say that the present Congress will be responsible for the failure to provide for the threatened approach of cholera, and upon them let the responsibility rest—the sanitarians of the country have done their duty.

OBITUARY.

HENRY AUSTIN MARTIN, M.D.

Dr. HENRY A. MARTIN died at his home in Boston on the 7th day of December, 1884, aged 60 years and five months.

"Dr. Martin was born in London, England, July 23, 1824, and was the eldest son of Henry James Martin, Esq., M.R.C.S., of a French Huguenot family, which emigrated in 1685 (Revocation of Edict of Nantes) to Drogheda, in Ireland. He was related by blood to many distinguished families, among others the Agnews, of Lochnant, in Scotland; the DeCourseys and Blennerhassetts, of Ireland; the Duke of Wellington, Lord Mornington, Lord Hinsale, Lord Rosse, and the Earl of Eglintown. His great-granduncle was the Harmon Blennerhassett, the victim of Burr's rebellion. Another of his ancestors, General James Agnew, killed at Germantown, was at one time in command of the British troops stationed on Boston Neck during the Revolution."

Of all the distinguished men of the medical profession of the present generation who have passed from the stage of action, few have stood out so prominently as Dr. Martin. He early marked out for himself a career which he pursued with ceaseless toil until he accomplished it. No drudgery was too irksome for him when it lay in the way of the ascertainment of truth. He thoroughly mastered every detail as he came to it, and his very capacious memory was stored with endless lore.

He accomplished for American medicine one great fundamental reform, and enriched surgery with simple but priceless devices. What Dr. Martin did for the practice of vaccination in America few of us are yet able fully to estimate. He was a Jennerian of the purest type, for he had studied the great master with ardent admiration, and with full confidence in the truth and weighty importance of his testimony. Jenner's "Inquiry" was to Dr. Martin the best example of a scientific record, and he entered fully into the spirit of the teachings of the new practice.

It was easy to understand why Dr. Martin should have selected vaccination as a specialty. After a very short study of the subject he was deeply impressed with the danger that the principles which Jenner had laid so deeply and so wisely would be departed from, and the whole practice brought into disrepute, and that it would take a clear foresight and a world of painstaking to avert such a calamity. Through many years Dr. Martin was a careful propagator of vaccine of the humanized stock, and all of this time he was an inveterate student of the early literature of vaccination. Not a pamphlet on vaccination so dingy, nor a hand-bill, or poster, or cartoon so insignificant, or a book so obscure, or difficult to obtain, that was not made to yield its modicum of knowledge. His study and his observation increased *pari passu*, until his library at last became the most complete collection outside of the British Museum, and his practice became more

fertile in results than ever since the days of Jenner. Dr. Martin's detailed knowledge of the pristine efficacy of vaccine brought it more and more forcibly to his mind that humanized virus, despite the greatest care in its cultivation, was deteriorating. It seems to have been only by accident that he found the instructive brochure of Bousquet, wherein is described and pictorially illustrated the parallel history of a long humanized stock and the newly discovered stock of Passy. This essay only confirmed what Dr. Martin had worked out independently in his years of observation, and he says in a privately printed work* he wishes that this volume, and that of Decauteleu on "Vaccine Cicatrices," very precious papers which he presented to a few friends, "may be preserved," and that, as a pair of literary life-preservers, they may save his reports from that dread dead sea of oblivion and waste-paper which swallows up so many of the results of labor in this and every other field of medical research.

Dr. Martin did not need Bousquet or Decauteleu as life-preservers of his literary works, but he did a valuable service in rescuing Bousquet's quite neglected paper, and Decauteleu's almost forgotten fragment from oblivion, in France, and in introducing to the English-speaking profession beautiful demonstrations of his own theory and practice, and very choice examples of the depth of learning which lay hidden in the quite neglected literature of vaccination.

By every means Dr. Martin had prepared himself for the great and beneficent innovation which he was about to establish in America. His immense experience pointed out to him that small-pox was making a gain steadily year by year, and that the Jennerian arm to arm propagation, and the Brycian method of storing and transmission in form of crust, was too slow a way to satisfy the immense demands in time of a threatened outbreak, to say nothing of the quite current belief in the gradual attenuation of virus by long transmission.

The story of the introduction of animal vaccination into America has been often told. The theory of the recourse to the original source, viz: spontaneous cow-pox in the animal, had now and again been practically resorted to in Europe, but a continuous service of animal vaccination even there was limited to Italy, and was but little known in the other European countries; and the stock in Italy was afterwards not freed from the suspicion that it was retro-vaccine, and not in unbroken succession from animal to animal. Finally, the French profession, attracted by the Italian method, began experimental practice in animal vaccination, which culminated in success after the discovery of the case of spontaneous cow-pox in Beaugency. This French success attracted Dr. Martin's attention. Occurring as it did at a time when there was great scarcity of good humanized vaccine in this country, and a steadily increasing number of small-pox cases, he determined to send an agent to Paris to get instructions from Professor DePaul, and to bring home fresh virus for the purpose of planting the seed in America.

* Animal Vaccination; Dr. Martin's Reports and Illustrative Documents.

In 1870 his agent returned from Europe with minute autographic instructions from Professor DePaul, and on the 23d of September, the very day of the arrival of the Beaugency virus, he vaccinated his little herd of nearly fifty young bovine animals. From this time forth Dr. Martin did not once lose the precious seed he had planted. His previous profound knowledge of the phenomena of vaccine at once made him master of all the difficulties attending his new work. Notwithstanding all of Dr. Martin's fitness for the establishment of a great innovation, there were great difficulties to be overcome, as the following quotations will show :

"For thirteen years I have been at work every day, almost every hour, in the study and practice of vaccination from the arm ; as thoroughly familiar with the varieties and effects of that virus as any man could possibly be. With all that knowledge and experience ten thousand-fold repeated, and *furthermore, with a most decided prejudice against animal vaccination*, I began investigations in regard to bovine vaccination. I was amazed and delighted with the result ; I announced it to the profession, but I have not for two years and a half ceased also to propagate the old virus. In February, 1873, I abandoned vaccination with humanized virus—of even a single remove, and there is no probability that I shall ever make, except perhaps as an experiment, a single vaccination with humanized virus. I am by no means a bigot ; I fully recognize the value of humanized virus ; but I know as absolutely as anyone can possibly know anything, that bovine vaccine virus, and that *alone*, will *always* induce the typically perfect disease, with febrile reaction—a late appearance of areola—post-areolar development of vesicle, etc.—but differing very widely from the vaccine from long-humanized virus, and free from the danger of syphilis and erysipelas, which there is in humanized virus often in a single remove ; and knowing this, I feel pretty bitter when I find men of the highest eminence speaking against animal vaccination, who have never seen a single patient vaccinated from the heifer. All I have ever asked was a careful inspection of a single case of vaccination from the heifer three days from vaccination till the fall of the crust. No man with practical knowledge of vaccination has so inspected a single case without becoming an advocate, or at any rate ceasing to be an opponent of animal vaccination."

"To know so thoroughly a most important truth, to seek to make it known and to be encountered by falsehoods and lukewarmness, and men opposing merely for opposition's sake, is very, very hard. I feel every day, every hour, some of the feeling that makes really great benefactors of humanity sad visaged men. When was there ever a really great innovator for the good of man that was not reviled and persecuted ? One there was too great and too good to be named by me, but since Him think of Paré, Sydenham, Vesalius, Jenner, Lady Mary Montague, Boylston, in Boston, 1721 ; Waterhouse, in Boston, 1799. All, every man who ever discovered or first promulgated a great good to man, has done so at the expense

of his own comfort and happiness. If not always crucified or burned at the stake, literally, their lives have been long martyrdoms of chagrin and misrepresentation."

The above extracts are from letters written in 1877, and give evidence of the indifference, opposition and neglect which the founder of animal vaccination had to encounter.

Had the establishment of animal vaccination depended upon the slow influence of one establishment, instead of becoming the universal practice in America in ten years, it would probably have been extended much more slowly. Dr. Martin foresaw, and with generous impulse imparted all of his valuable knowledge, without stint, first to Dr. Frank P. Foster, of New York, and afterwards to all the propagators who took up the work during 1870 and 1877. Not only did he instruct minutely, personally and by letter, the men who had undertaken animal vaccination, but with generous hand he gave from his choice collection of books those rare, but indispensable, treatises of the first vaccinators.

It cannot be wondered at that Dr. Martin many times appeared to be unamiable, when it is known how fiercely he had to oppose the unprincipled men who went into the business of cultivating vaccine with a view to money-making. Several of these persons by every underhanded means pried into the secrets of Dr. Martin's stables, bribing the stablemen, when they could, and at last putting on the market a product which came near proving disastrous to honest dealers. The triumph of Dr. Martin against the worst of this class, only a few months before his death, is a matter of sincere gratification to all the friends of pure vaccination—to the true promoters of animal vaccination, the men of education who had undertaken it in the proper spirit. Some time in 1877, when the rivals in the new business of animal vaccination had increased to five in as many different States, one of the propagators, Dr. B. Rush Senseney, of Pennsylvania, an esteemed follower of Dr. Martin, wrote to the writer of this in great trouble because of the entire failure of his stock. He had gone into the business with every care, and with all the preparation accessible to him. He bred his own Jerseys, and selected only the healthiest as vaccinifers. But in the midst of a flourishing business his seed virus failed him. He did not know Dr. Martin personally, and did not dream of the possibility of securing "seed" quills from him. He was advised not to hesitate, but have the whole subject of his trouble laid before Dr. Martin, and there was little doubt of his success. Dr. Martin responded promptly to his demand, and properly charged "seed" quills were sent from his stables, and so unselfishly saving his active rival from great loss. Neither is this the only instance. As late as 1880 there was probably not a propagator in the country who had not been obliged to appeal to Dr. Martin for stock, and each appeal was promptly answered by assistance. Such actions speak louder than any praise we might couch in words.

It is not necessary to dwell longer on the great benefit conferred

upon suffering humanity and medical practice by the introduction of animal vaccination. If the title of "THE JENNER OF AMERICA" had not been bestowed by the common verdict of the English and American profession upon Dr. Waterhouse, Dr. Martin surely merits the title, if there be any such distinction, to indicate a position quite near to that of the great discoverer himself.

Dr. Martin's improvements in surgical practice were of highly practical value, and were the outcome of his solid foundation in the principles of the art. His rubber bandage, as applied to so many surgical diseases—chronic ulcers, synovitis, sprains, eczema, etc.—was a great blessing to poor people, as by this means patients were enabled to go about their work while the cure was being effected, and it enabled marine surgeons and poor-house physicians to clear their wards in a few days of patients who were the opprobrium of these institutions inasmuch as they were hopelessly chronic, or only escaped death by amputation of the diseased limb. We are sorry that our space does not permit us to say more of the surgical work done by Dr. Martin, especially in the operation of tracheotomy without a cannula, of which operation he was an early advocate.

His profound sympathy with the condition in which the war left the medical profession of the South is a very grateful recollection. He entered the Army early in the war, and was breveted Lieutenant Colonel. Some part of his service was in the West, where, at one time, he was in charge of a small-pox hospital at Pilot Knob Mission, and where he conceived the plan of variolating cattle, but was ordered away before he accomplished his design.

In 1864 Dr. Martin was stationed at Norfolk and Portsmouth, where he was Medical Director. He was stationed also in Newbern, in this State. He had many friends and correspondents in the South when the war broke out, and he felt great interest in the fate of Petersburg. He wrote: "When I was in the field before Petersburg as Medical Director of the First Division of the First Army Corps, Army of the Potomac, I felt very strongly how deep must be the love of a Virginian in that poor, but glorious old State, and I wished that I was one." At another time he writes (just before the Chicago meeting of the American Medical Association): "Why don't you Southern doctors come to the meetings of the Association? There never was a war between the doctors North and South, and never would have been a war if doctors had been consulted."

The writings of Dr. Martin were not numerous, but it can be said truly that everything he prepared for the public was of a substantial character, and only saw the light after a thorough conviction of its truth. He disliked to write, but when he was fairly at work thoughts flowed in such a torrent that it taxed the celerity of his penmanship to the utmost. The following is not, probably, a complete list of his writings, but happens to be all to which we have access just now:

"The Treatment of Fistula in Ano by Caustics;" "Surgical Uses other than Hæmostatic of the Strong Elastic Bandage;" "A Few

Words on the Unfortunate Results of Vaccination ;" "Jefferson as a Vaccinator" (reprint from the NORTH CAROLINA MEDICAL JOURNAL); "Anti-Vaccination : A Reply to Bergh" (*North American Review*); "Animal Vaccination : Dr. Martin's Report, with Illustrative Documents ;" "Pure Animal Vaccination" (*New York Medical Record*); "A New Adhesive Plaster, Especially Adapted to the Requirements of Modern Surgery ;" "Report on Animal Vaccination" (to the American Medical Association); another series on "Medical Skepticism" (read before the District Medical Society, and printed, in part, in the Journal of the Gynecological Society).

JAMES G. THOMAS, M.D.

Dr. THOMAS was born in Kentucky in 1835, and died in December, 1884, in Washington, D. C. Dr. Thomas graduated at the University of New York in 1856. He was a surgeon in the Confederate Army, at one time Medical Director of Hardie's Corps. He was one of the first contributors on "The Use of the Thermometer in the Practice of Medicine" in this country, and his last considerable contribution was on *Dengue*. His death was very sincerely deprecated, particularly by his colleagues in sanitary work.

The following circular was issued by the Executive Committee of the Ninth International Congress :

"NINTH INTERNATIONAL CONGRESS.

"The Executive Committee announce, with great sorrow, the death of Dr. JAMES G. THOMAS, of Savannah, one of the members of the General Committee of Organization.

"Dr. Thomas took a deep interest in the success of the Congress, and, at a considerable sacrifice, came to Washington, November 29th, to attend the meeting for organization. While on the way he was seized with a violent chill, and on his arrival at once took to his bed, from which he never again arose, the disease proving to be acute lobar pneumonia. He may be said to have lost his life in the service of the Congress, and it is an irreparable loss to us, as well as to his bereaved family and his fellow-citizens of Savannah and of Georgia.

"Washington, D. C., December 8, 1884."





